PERQ MEMORY BOARD

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REFERENCE DESIGN	PART NUMBER	SCHEMATIC PAGE #
U1	74S374	4
U2	UPD416C2	20
U3	UPD416C2	20
U4	UPD416C2	20
U5	UPD416C2 SUB PARTS	20
U6	UPD416C2 (MK4116-3) (F16K4DC)	20
U7	UPD416C2	20
U8	UPD416C2	20
U9	MPD416C2	20
U10	748241	4
U11	74S374	4
U12	UPU416C2	20
U13	UPU416C2	20
U14	UPU416C2	20
U15	UPU416C2 SUB PARTS	20
U16	UPU416C2 (MK4116-3) (F16K4DC)	20
U17	UPU416C2	20
U18	UPU416C2	20
U19	UPD416C2	20
U20	74LS166 (16 PIN SOCKET)	10
U21	74S374	8
U22	74S241	4
U23	UPD416C2	20
U24	UPD416C2	20
U25	UPD416C2	20
U26	UPD416C2 SUB PARTS	20
U27	UPD416C2 (MK4116-3) (F16K4DC)	20
U28	UPD416C2	20
U29	UPD416C2	20
U30	UPD416C2	20
U31	748374	5
U32	UPD416C2	20
U33	UPD416C2	20
U34	UPD416C2	20
U35	UPD416C2 SUB PARTS	20
U36	UPD416C2 (MK4116-3) (F16K4DC)	20
U37	UPD416C2	20
U38	UPD416C2	20
U39	UPD416C2	20
U40	74L8166 (16 PIN SOCKET)	10

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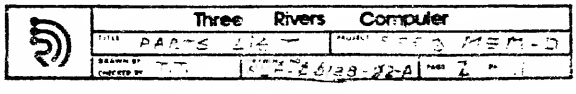
REFERENCE DESIGN	PART NUMBER		SCHEMATIC PAGE #
U41	74S374		8
U42	UPD416C2		20
U43	UPD416C2		20
U44	UPD416C2		20
U45	UPD416C2	SUB PARTS	20
U46	UPD416C2	(MK4116-3) (F16K4DC)	20
U47	UPD416C2		20
U48	UPD416C2		20
U49	UPD416C2		20
U50	74S374		7
U51	74S374		5
U52	UPD416C2		20
U53	UPD416C2		20
U54	UPD416C2		20
U55	UPD416C2	SUB PARTS	20
U56	UPD416C2	(MK4116-3) (F16K4DC)	20
U57	UPD416C2		20
U58	UPD416C2		20
U59	UPD416C2		20
U60	74LS166	(16 PIN SOCKET)	9
U61	SPARE		
U62	UPD416C2		20
U63	UPD416C2		20
U64	UPD416C2		20
U65	UPD416C2	SUB PARTS	20
U66	UPD416C2	(MK4116-3) (F16K4DC)	20
U67	UPD416C2		20
U68	UPD416C2		20
U69	UPD416C2		20
U70	74S374		7
U71	74S374		14
U72	UPD416C2		20
U73	UPD416C2		20
U74	UPD416C2		20
U75	UPD416C2	SUB PARTS	20
U76	UPD416C2	(MK4116-3) (F16K4DC)	20
U77	UPD416C2		20
U78	UPD416C2		20
U79	UPD416C2		20
U80	76LS166	(16 PIN SOCKET)	9



PERQ MEMORY BOARD

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REFERENCE DESIGN	PART NUMBER		SCHEMATIC PAGE #
U81	74S280		6
U82	74S374		4
U83	UPD416C2		20
U84	UPD416C2		20
U85	UPD416C2		20
U86	UPD416C2	SUB PARTS	20
U87	UPD416C2	(MK4116-3) (F16K4DC)	20
U88	UPD416C2		20
U89	UPD416C2		20
U90	UPD416C2		20
U91	74LS166	(16 PIN SOCKET)	10
U92	74S374		8
U93	74S374		14
U94	74S374		4
U95	UPD416C2		20
U96	UPD416C2		20
U97	UPD416C2		20
U98	UPD416C2		20
U99	UPD416C2		20
U100	UPD416C2		20
U101	UPD416C2	SUB PARTS	20
U102	UPD416C2	(MK4116-3) (F16K4DC)	20
U103	UPD416C2		20
U104	UPD416C2		20
U105	UPD416C2		20
U106	UPD416C2		20
U107	UPD416C2		20
U108	UPD416C2		20
U109	UPD416C2		20
U110	UPD416C2		20
U111	74LS166	(16 PIN SOCKET)	10
U112	74S374		8
U113	74S374		5
U114	UPD416C2		20
U115	UPD416C2		20
U116	UPD416C2	SUB PARTS	20
U117	UPD416C2	(MK4116-3)	20
U118	UPD416C2	(F16K4DC)	20
U119	UPD416C2		20

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REFERENCE DESIGN	PART NUMBER	SCHEMATIC PAGE #
U120	UPD416C2	20
U121	UPD416C2 (MK4116-3) (F16K4DC)	20
U122	74S374	7
U123	UPD416C2	20
U124	UPD416C2	20
U125	UPD416C2	20
U126	UPD416C2 SUB PARTS	20
U127	UPD416C2 (MK4116-3)	20
U128	UPD416C2 (F16K4DC)	20
U129	UPD416C2	20
U130	UPD416C2	20
U131	74LS166 (16 PIN SOCKET)	9
U132	74S374	7
U133	74S74	14
U134	74S374	5
U135	UPD416C2	20
U136	UPD416C2	20
U137	UPD416C2	20
U138	UPD416C2 SUB PARTS	20
U139	UPD416C2 (MK4116-3)	20
U140	UPD416C2 (F16K4DC)	20
U141	UPD416C2	20
U142	UPD416C2	20
U143	SPARE	
U144	74S51	3.6
U145	UPD416C2	20
U146	UPD416C2	20
U147	UPD416C2	20
U148	UPD416C2 SUB PARTS	20
U149	UPD416C2 (MK4116-3)	20
U150	UPD416C2 (F16K4DC)	20
U151	UPD416C2	20
U152	UPD416C2	20
U153	74LS166 (16 PIN SOCKET)	9
U154	74S280	6
U155	UPD416C2	20
U156	UPD416C2 SUB PARTS	20
U157	UPD416C2 (MK4116-3)	20
U158	UPD416C2 (F16K4DC)	20
U159	UPD416C2	20
U160	UPD416C2	20

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REFERENCE DESIGN	PART NUMBER			SCHEMATIC PAGE #
U161	UPD416C2	(MK4116-3)	(F16K4DC)	20
U162	UPD416C2	(MK4116-3)	(F16K4DC)	20
U163	74S175			6
U164	74S153			6
U165	74S279			14
U166	74S74			3
U167	UPD416C2			20
U168	UPD416C2			20
U169	UPD416C2	SUB PARTS		20
U170	UPD416C2	(MK4116-3)		20
U171	UPD416C2	(F16K4DC)		20
U172	UPD416C2			20
U173	UPD416C2			20
U174	UPD416C2			20
U175	74S139			6,26
U176	74S74			3
U177	74S08			3
U178	SPARE			
U179	74SD4			16
U180	74SD4			16
U181	74SD4			16
U182	74SD4			16
U183	74SD4			17
U184	74SD4			17
U185	74SD4			17
U186	74SD4			17
U187	74SD4			18
U188	74SD4			18
U189	74SD4			18
U190	74SD4			18
U191	74SD4			19
U192	74SD4			19
U193	74SD4			19
U194	74S04			19
U195	74S258			15
U196	74S258			15
U197	74S258			14
U198	74S258			14
U199	74S258			14

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REFERENCE DESIGN	PART NUMBER	SCHEMATIC PAGE #
U201	74S112	24
U202	74S112	24
U203	74S112	25
U204	74S00	4,5
U205	74LS374	27
U206	74S37	25
U207	74S00	14, 22, 26, 27
U208	74LS163	22
U209	74LS374	22
U210	74S02	6, 14, 15, 23
U211	74LS374	15
U212	74LS197	14
U213	74LS374	23
U214	74S112	24
U215	74S112	24, 25
U216	74S112	25
U217	74S03	25, 27
U218	AM27S29 (HM1-7649-6) (74S472) (TBP1BS42) (20 PIN SOCKET)	27
U219	74S175	27
U220	74S32	22, 23, 24
U221	74LS374	22
U222	74LS174	22
U223	74S197	22
U224	74LS393	15
U225	74LS197	14
U226	74LS374	23
U227	74S112	24
U228	74S30	24
U229	74S32	25, 27
U230	AM27S29 (HM1-76A9-6) (74S472) (TBP18S42) (20 PIN SOCKET)	27
U231	74S10	23, 25
U232	74S74	22, 23
U233	74LS163	22
U234	74LS240	23
U235	74S197	22
U236	74LS393	14
U237	74S138	23
U238	74S112	24
U239	74S11	24, 25
U240	74S112	25

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REFERENCE DESIGN	PART NUMBER	SCHEMATIC PAGE #
U241	XTAL K1100A (14 PIN SOCKET)	24
U242		
U243	74S04	25, 26
U244	74LS163	26
U245	AM27S29 (HMI-7649-6) (74S472) (TBP18542) (20 PIN SOCKET)	26
U246	74S374	26
U247	74S225	13
U248	74S225	13
U249	74S374	13
U250	74S112	12
U251	74S00	12, 23, 25
U252	74S112	12
U253	74S20	12
U254	74S112	26
U255	74S162	26
U256	AM27S29 (HM1-76496) (74S472) (TBP18S42) (20 AN SOCKET)	26
U257	74S374	26
U258	74S374	11
U259	74S32	13, 25
U260	SPARE	
U261	7643-5 (18 PIN SOCKET)	11
U262	7643-5 (18 PIN SOCKET)	11
U263	7643-5 (18 PIN SOCKET)	11
U264	74S374	11
U265	74S225	11
U266	74S225	11
U267	74S32	11, 12
U268	74S195	12
U269	74S195	12
U270	74S37	12, 25
U271	SPARE	
U272	74S74	26
U273	74S08	26
U274	74S74	26
U275	74S280	3
U276	74S280	3

7/17/80 PRQ-PCB-MEM-D RESISTORS

REGISTOR	VALUE		PAGE
R1	RC07GF102J	1K	3
R2	RC07GF271J	270Ω	20
R3	RC07GF102J	1K	3
R4	RC07GF470J	47Ω	9
R5	RC07GF102J	1K	6
R6	RC07GF102J	1K	14
R7	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	16
R8	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	16
R9	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	16
R10	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	16
R11	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	17
R12	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	17
R13	NOTE: ANOTHER SUITABLE SUBSTITUTE IS 785-3-R22 (22)		17
R14			17
R15	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	18
R16	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	18
R17	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	18
R18	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	18
R19	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	19
R20	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	19
R21	785-3-R33 (33Ω)	(4310R-102-330) (33Ω)	19
R22	785-3-R33 (33Ω)	(4310R-102-330)	19
R23	RC07GF102J	1k	25
R24	JA41J1	THERMISTOR	28
R25	RC07GF102J	1K	14
R26	RC07GF102J	1K	22
R27	RC07GF102J	1k	22
R28	RC07GF102J	1k	23
R29	RC07GF102J	1k	26
R30	RC07GF102J	1k	12
R31	RC07GF330J	33Ω	26
R32	RC07GF102J	1k	12
R33	RC07GF330J	33Ω	26
R34			
R35	RC07GF102J	1k	26
R36	RC07GF102J	1k	27
R37	RC07GF102J	1k	24
R38	RC07GF330J	33Ω	24
R39	RC07GF100J	10Ω	24
R40	CB4G75	47Ω	24

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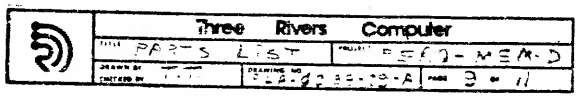
REFERENCE DESIGN	PART NUMBER	SCHEMATIC PAGE #
D2	IN4004	24
D3	IN4004	24
L1	WEE-1.0 uH (1uH)	24
L2	WEE-1.0 uH (1uH)	24
L3	6317-4 (coil) (0.08uH)	24
Q1	2N3866	24
Q2	Lm320LZ-5.0	20
QTY	SOCKETS	
1	514AG37D or 814AG11D	U241
8	516AG37D or 816AG11D	U20,U40, U80, U91, U111, U31, U153
3	518AG37D 04 818AG11D	U261,U262, U263
4	520AG37D or 820AG11D	U218, U230, U245, U256
C1	202A200225 MI	
C2	202A200225 MI	
THRU		
C53	202A200225 MI	
C54	CY15C103 M	
THRU		
C70	CY15C103 M	
C71	202A200225 MI	
C72	202A200225 MI	
C73	CY15C103 M	
THRU		
C89	CY15C103 M	
C90	202A200225 MI	
C91	202A200225 MI	
C92	CY15C103 M	
THRU		
C99	CY15C103 M	
C100	202A200225 MI	
C101	CY15C103 M	
THRU		
C108	CY15C103 M	
C109	202A200225 MI	
C110	202A200225 MI	



PERQ MEMORY BOARD

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REFERENCE DESIGN	PART NUMBER	SCHEMATIC PAGE #
C111	CY15C103 M	
THRU		
C118	CY15C103 M	
C119	202A2200225 MI	
C120	CY15C013 M	
THRU		
C127	CY15C103 M	
C128	202A200225 MI	
C129	202A200225 MI	
C130	CY15C103 M	
THRU		
C137	CY15C103 M	
C138	202A200225 MI	
C139	CY15C103 M	
THRU		
C146	CY15C103 M	
C147	202A200225 MI	
C148	202A200225 MI	
C149	CY15C103 M	
THRU		
C165	CY15C103 M	
C166	202A200225 MI	
C167	202A200225 MI	
C168	CY15C103 M	
THRU		
C184	CY15C103 M	
C185	202A200225 MI	
THRU		
C236	202A200225 MI	
C237	CY15C103 M	
THRU		
C242	CY15C103 M	
C243	202A200225 MI	
C244	CY15C103 M	
THRU		
C250	CY15C103 M	

PERQ MEMORY BOARD

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REFERENCE DESIGN	PART NUMBER		SCHMATIC PAGE #
C251	202A200225 MI		
THRU			
C258	202A200225 MI		
C259	CY15C103 M		
C260	202A200225 MI		
C261	202A200225 MI		
C62	CY15C103 M		
THRU			
C266	CY15C103 M		
C267	202A200225 MI		
C268	CY15C103 M		
THRU			
C277	CY15C103 M		
C278	202A200225 MI		
C279	202A200225 MI		
C280	CY15C103 M		
THRU			
C294	CY15C103 M		
C295	CY15C103 M		
C296	DD101	100 pf	24
C297	DD102	.001 uf	24
C298	DD181	180 pf	24
C299	DD270	. 27 pf	12
C300	CY15C103 M		
THRU			
C308	CY15C103 M		
C309	202A200225 MI		
THRU			
C326	202A200225 MI		

MEM - D

SUBASSEMBLY DIRECTORY

Drawing Number	Description
PLA-00138-01-A	MEM - D Parts List
-02-A	"
-03-A	"
-04-A	"
-05-A	"
-06-A	"
-07-A	"
-08-A	"
-09-A	"
-10-A	"
PLA-00138-11-A	MEM - D Parts List
GUA-00138-01-A	Gate Utilization
SDA-00138-01-A	Sub Assembly Directory
SDA-00138-02-A	Sub Assembly Directory
SSA-00138-01-A	PRO-SK4-MEM-D
SSA-00138-02-A	PRO-SK1-MEM-D
SCA-00138-01-A	MEM-Block Diagram
-02-A	MEM-Block Diagram
-03-A	Data Input - Parity
-04-A	Data Input : W0, W1
-05-A	Data Input : W2, W3
-06-A	Data Output
-07-A	Data Output
-08-A	Data Output

MEM - D

SUBASSEMBLY DIRECTORY

Drawing Number	Description
SCA-00138-09-A	Memory Shifter
-10-A	Memory Shifter
-11-A	Video Output
-12-A	Video Output
-13-A	Video Output
-14-A	Address Sel
-15-A	Address Sel
-16-A	Memory Drivers 3
-17-A	Memory Drivers 2
-18-A	Memory Drivers 0
-19-A	Memory Drivers 1
-20-A	Typical Ram Chip
-21-A	Ram Array
-22-A	I/O Registers
-23-A	I/O Registers
-24-A	Clock Generator
-25-A	Clock Generator
-26-A	Horizontal State
SCA-00138-27-A	Memory State

GATE UTILIZATION

PRQ-PCB-MEM-D

LEGEND

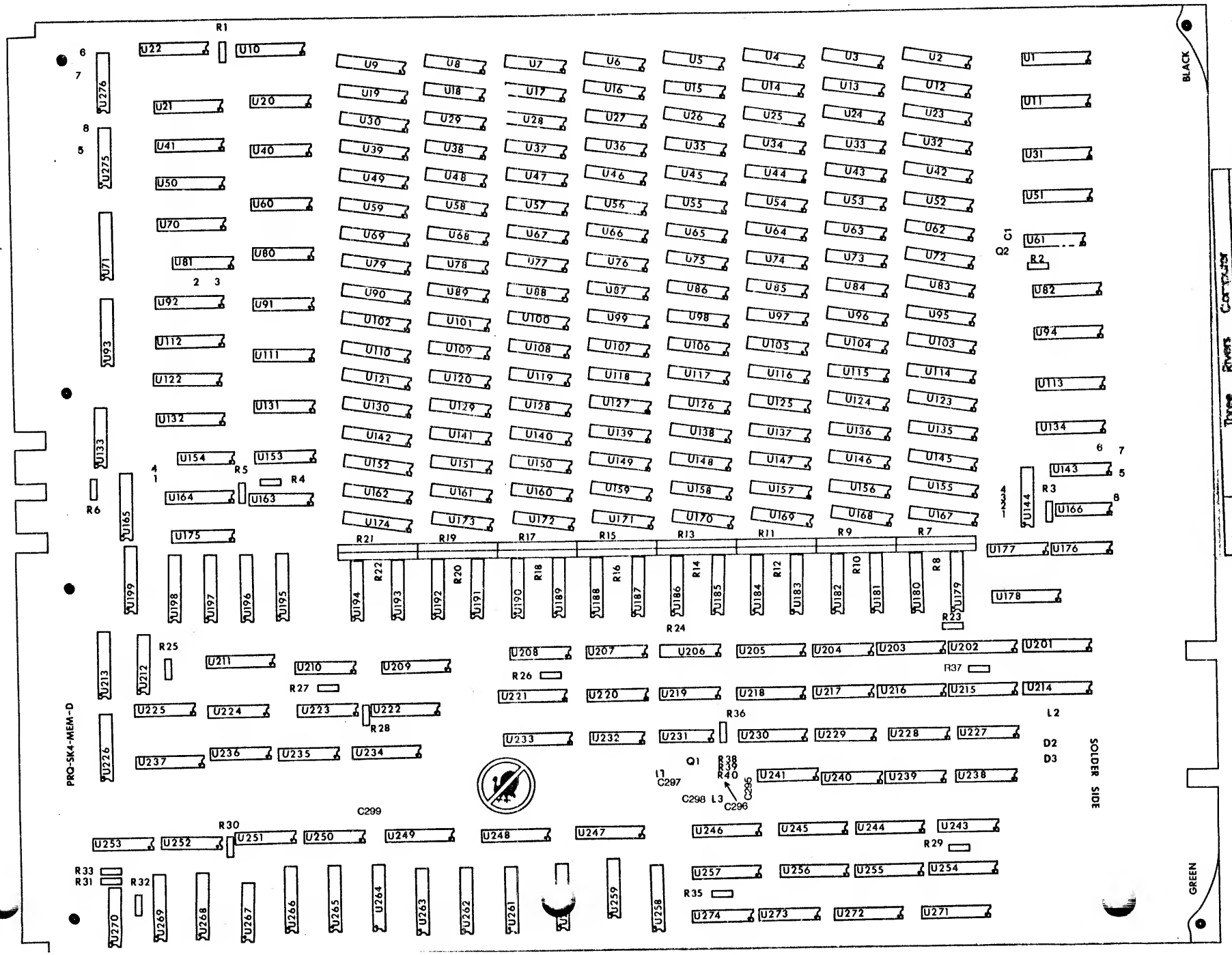
INPUT	OUTPUT
1, 2	3, 4

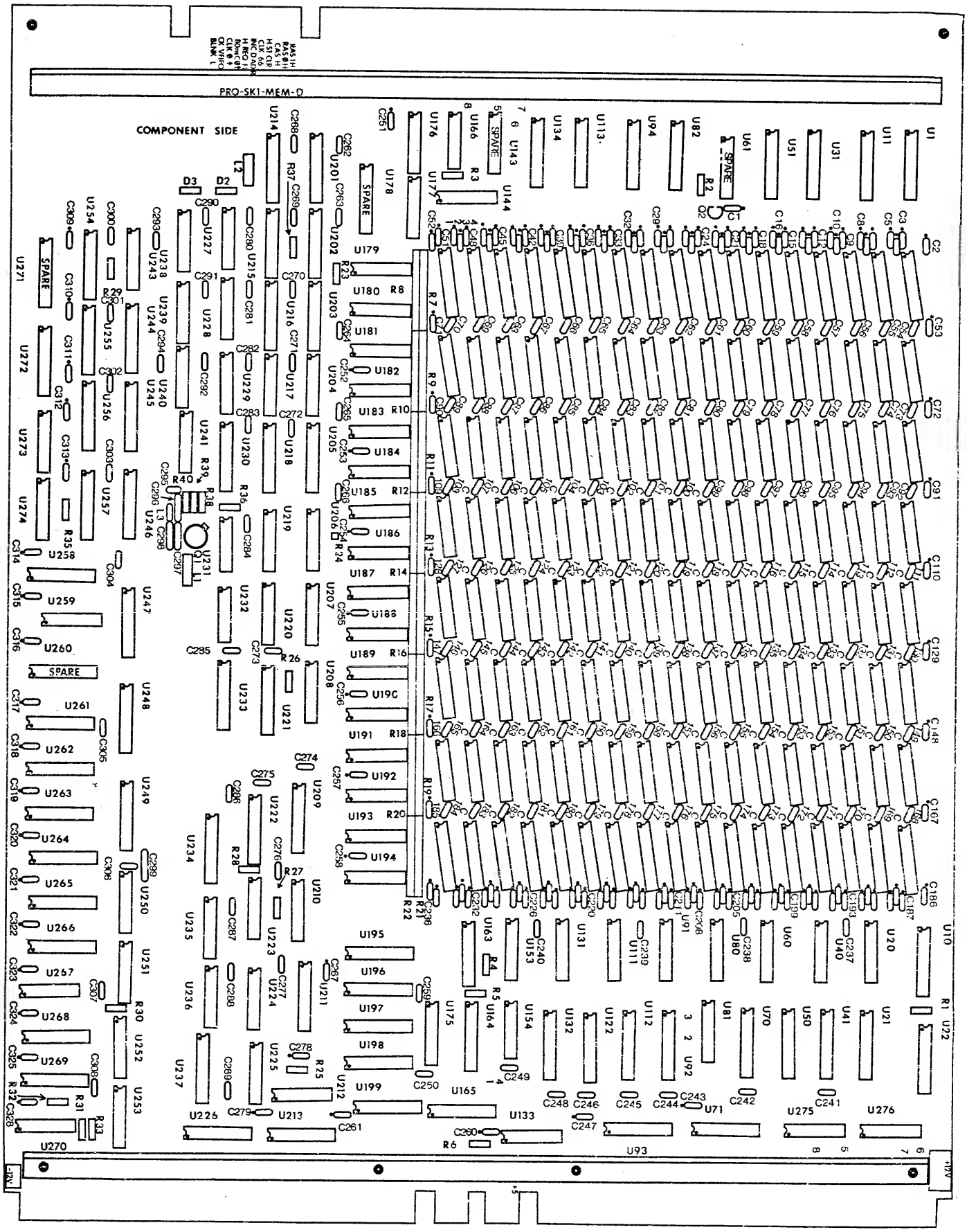
74S00	U251
1, 2-3	23
4, 5-6	
10, 9-8	25
13, 12-11	12

74S04	U243
1-2	
3-4	26
5-6	26
9-8	26
11-10	25
13-12	

74S32	U259
1, 2-3	
4, 5-6	25
10, 9-8	13
13, 12-11	

74S74	U274	U272
1, 2, 3, 4-5, 6		26
13, 12, 11, 10-9, 8	26	

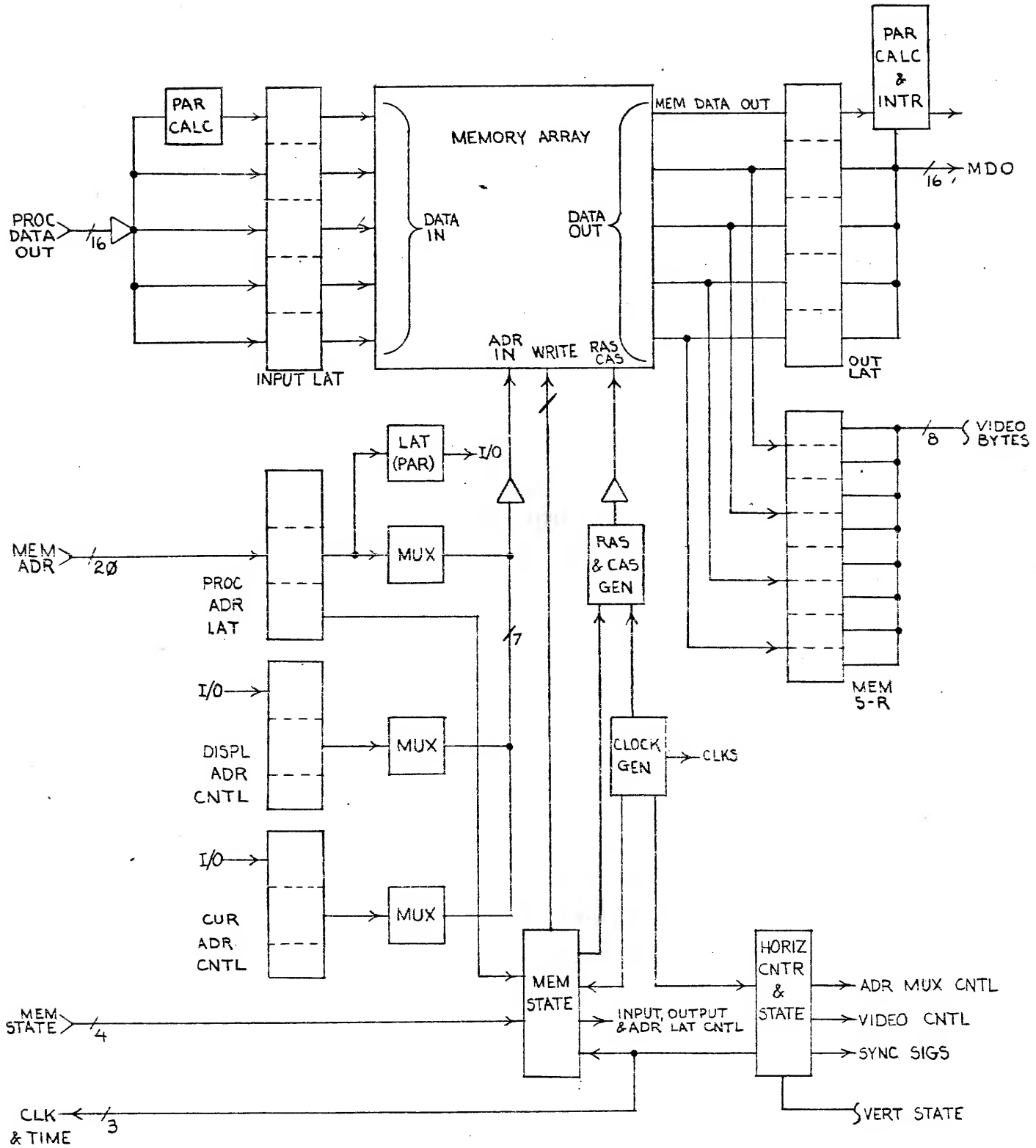

PRO-SK4-MEM-D
SOLDER SIDE
BLACK
GREEN
Three Rivers Computer
PRO-SK-0239-D
18 July, 1980



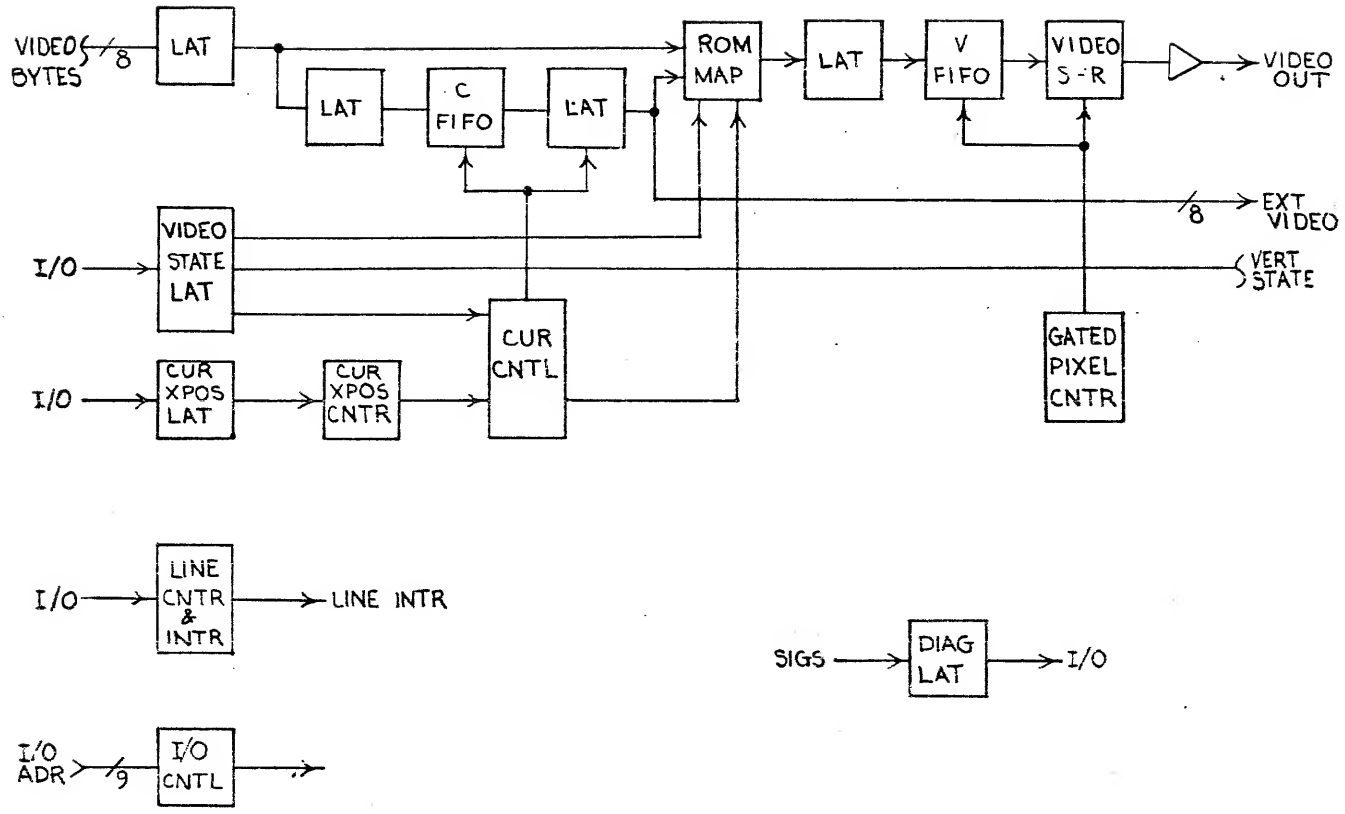
PRQ-SK-0238-D 18 July, 198

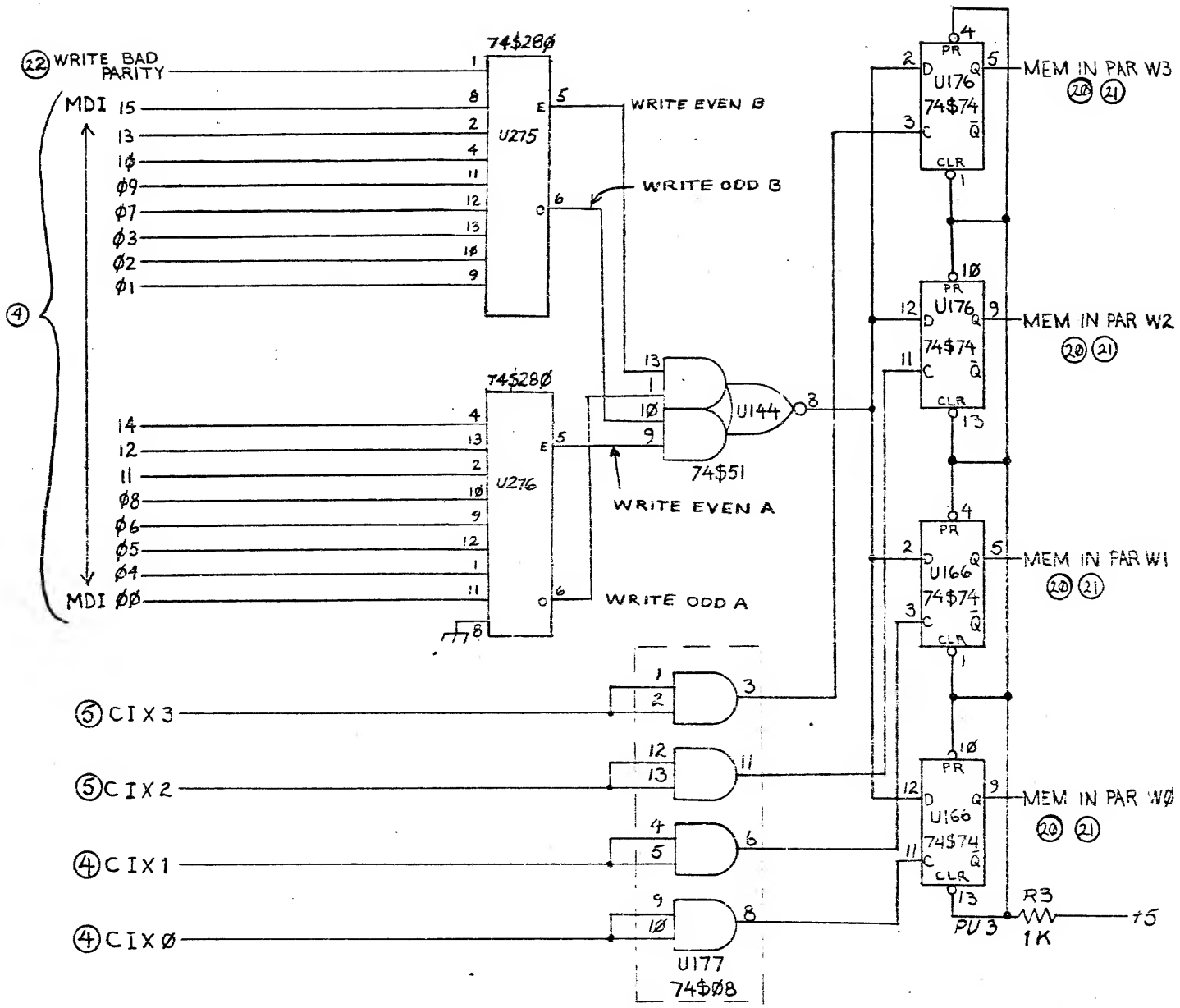
R34 68Ω

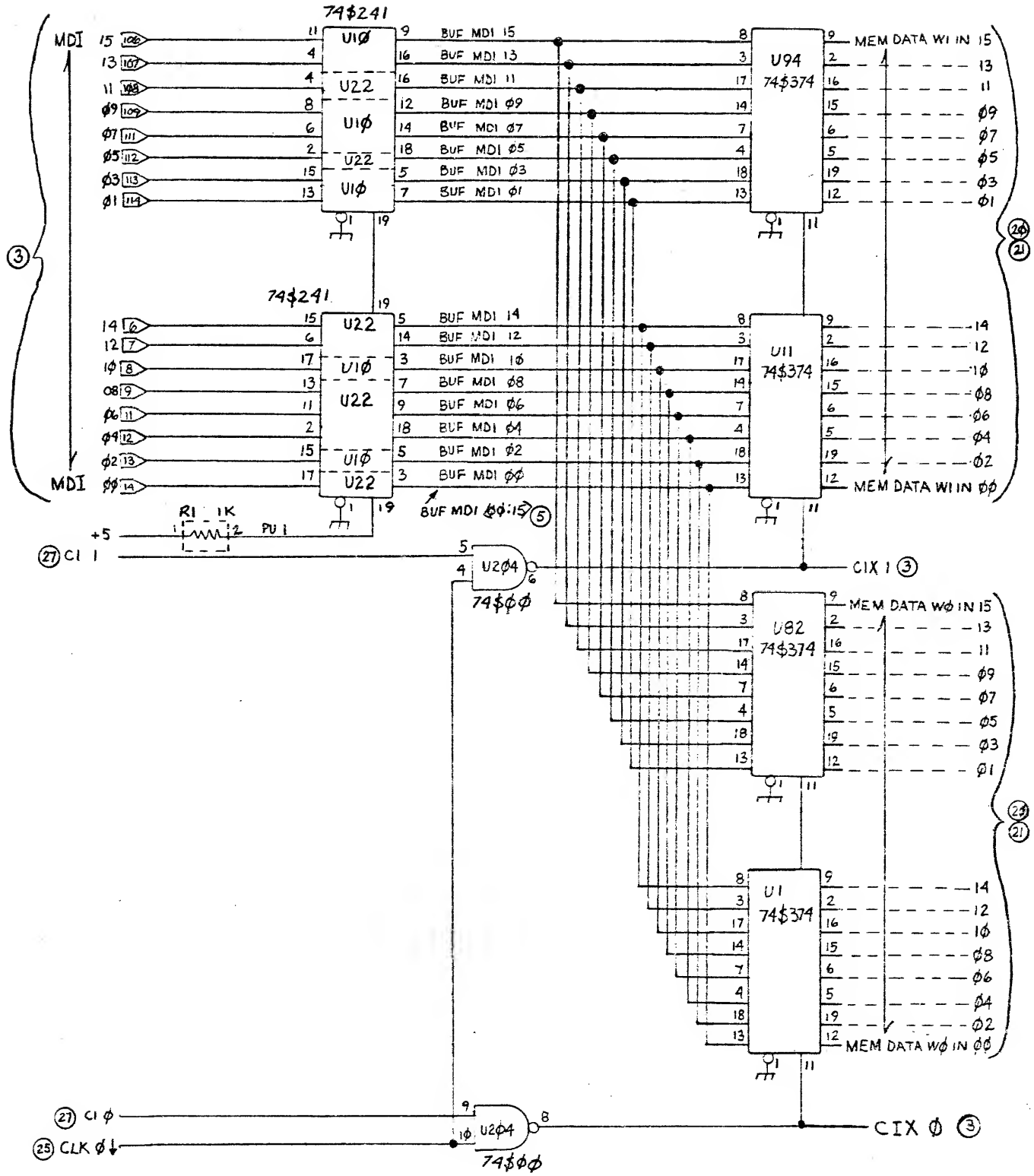
Three Rivers Computer	
PRQ-SK1-MEM-D	MEM-D
	SCA-CC/ES-02-A 2 - 2



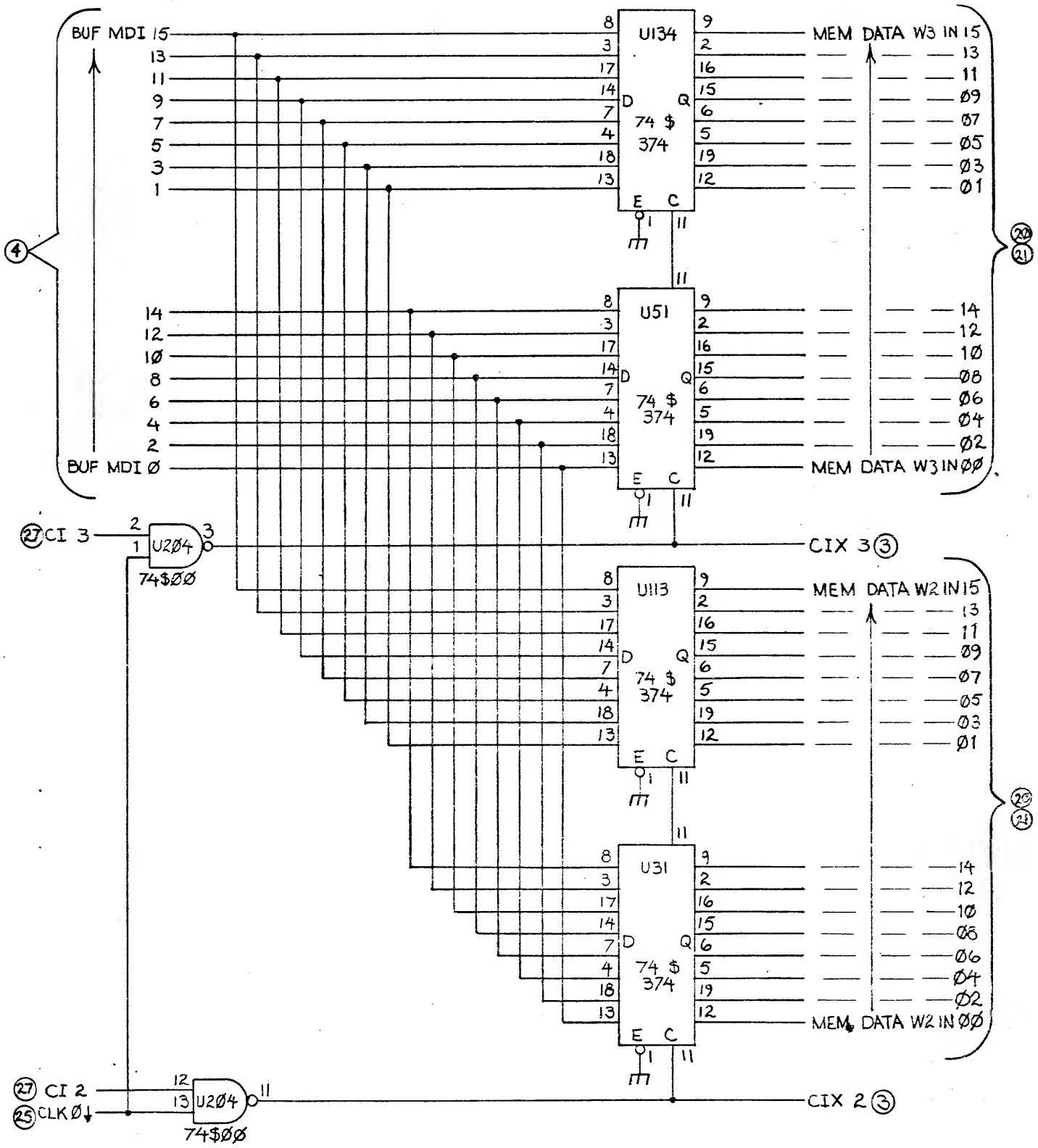
Three Rivers Computer	
MEM BOARD	PERQ - MEMBD
	ECA-00138-71-A 1 of 27


VIDEO BYTES
8
LAT
LAT
C FIFO
LAT
ROM MAP
LAT
V FIFO
VIDEO S-R
VIDEO OUT
8
EXT VIDEO
VIDEO STATE LAT
I/O
VERT STATE
CUR CNTL
GATED PIXEL CNTR
I/O
CUR XPOS LAT
CUR XPOS CNTR
I/O
LINE CNTR & INTR
LINE INTR
SIGS
DIAG LAT
I/O
I/O ADR
9
I/O CNTL

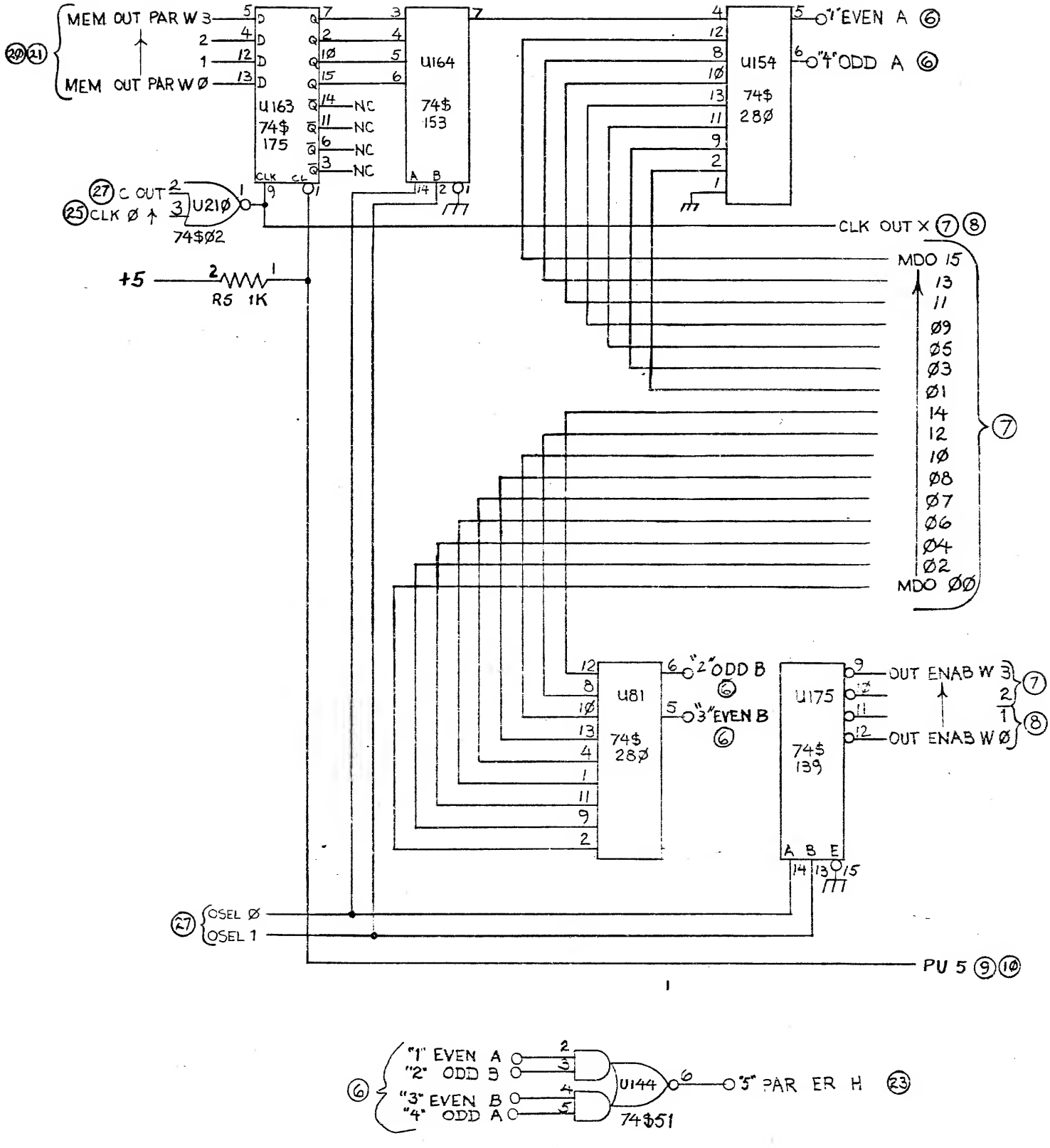

(22) WRITE BAD PARITY
MDI
(4)
MDI ØØ
74$28Ø
U275
U276
WRITE EVEN B
WRITE ODD B
WRITE EVEN A
WRITE ODD A
U144
74$51
(5) CIX3
(5) CIX2
(4) CIX1
(4) CIXØ
U177
74$ØØ8
U176
74$74
U166
MEM IN PAR W3
MEM IN PAR W2
MEM IN PAR W1
MEM IN PAR WØ
(20) (21)
PR
CLR
PU 3
R3
1K
+5



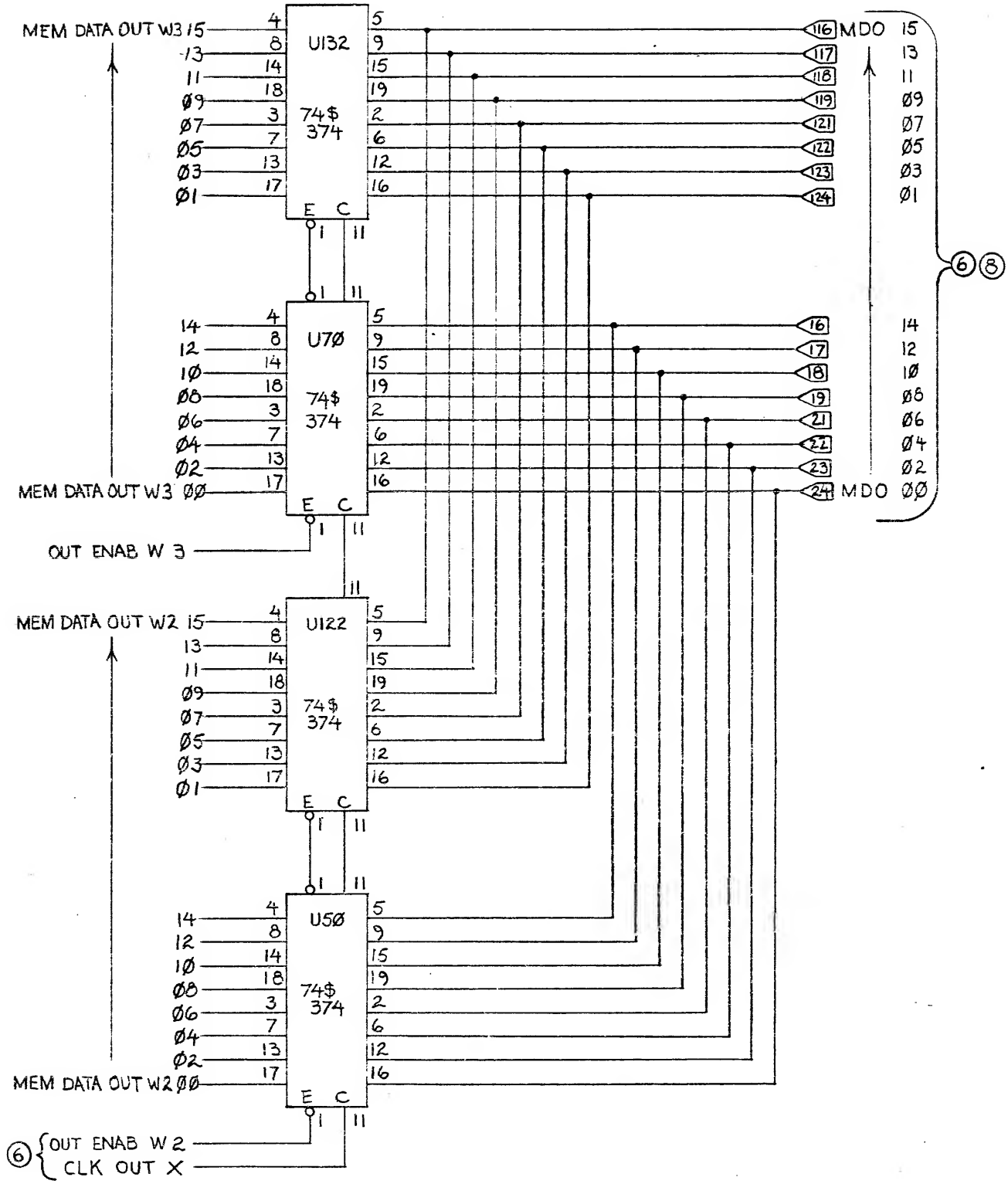
Three Rivers Computer	
TITLE DATA INPUT NS WI	PROJECT PRQ - MEM -
DRAWN BY DV 4/81 CHECKED BY	SIZE D DRAWING NO 8838-34-A PAGE 4 OF 27



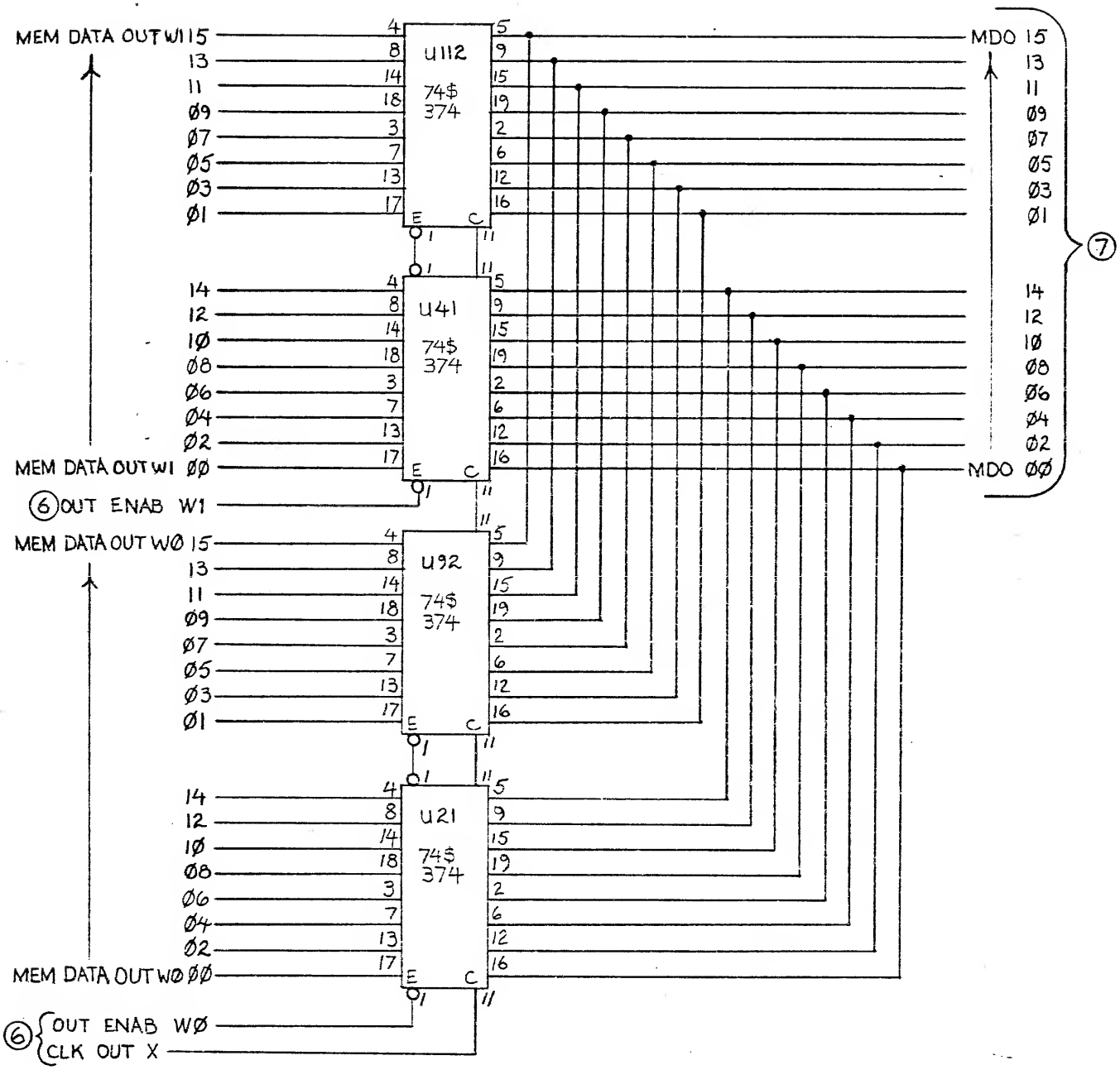
Three Rivers Computer	
DATA INPUT	PEEQ-MEM
	ECA-00132-05-A 5 of 27



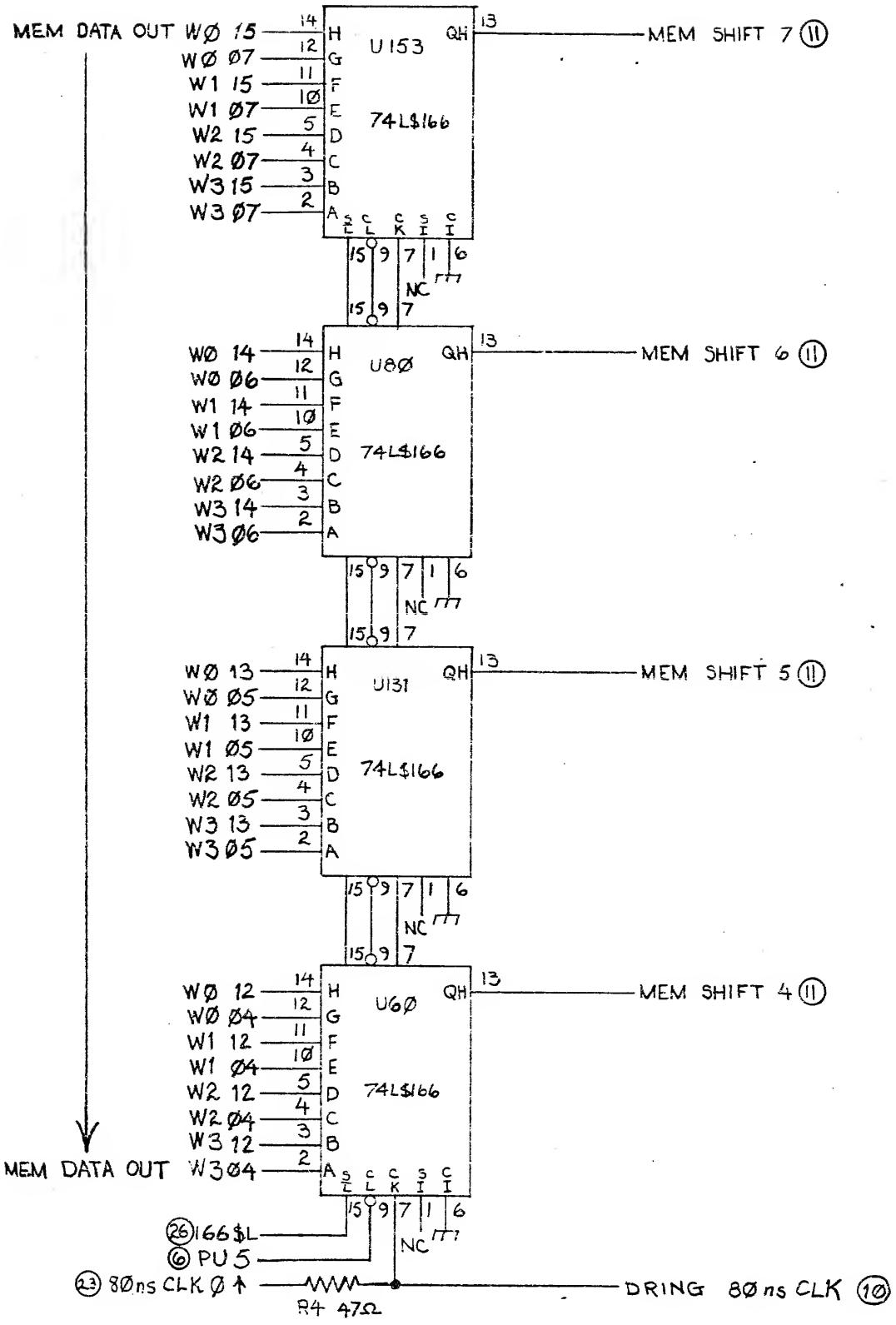
Three Rivers Computer		
TITLE DATA OUTPUT	PROJECT PERQ-MEM	
DRAWN BY / CHECKED BY	DRAWING NO. SCA-ØØ139-Ø6-A	SHEET 6 OF 27



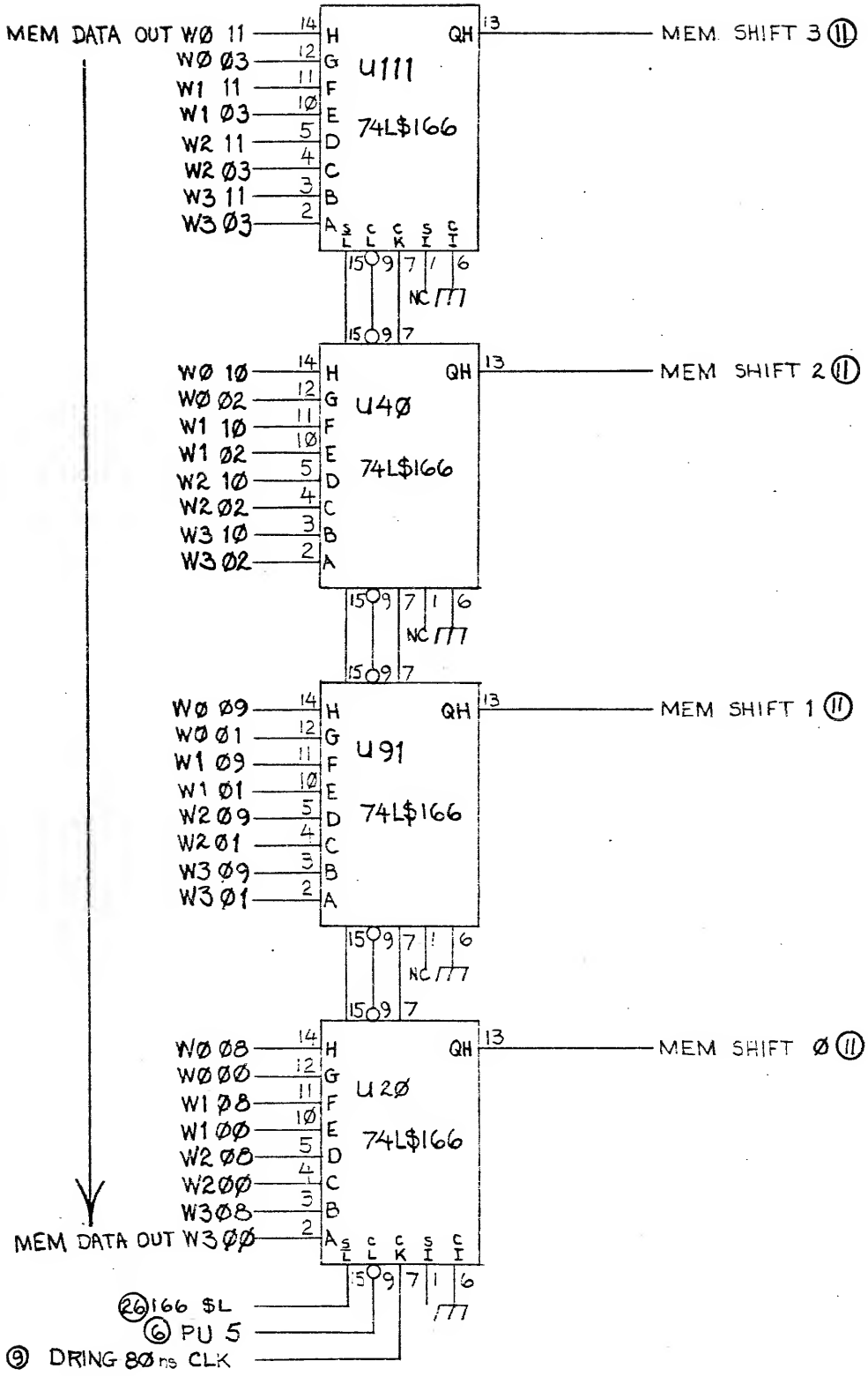
Three Rivers Computer		
TITLE DATA OUTPUT	PROJECT PERQ - MEM - D	
DRAWN BY [illegible] / CHECKED BY	ECA-Ø0128-Ø7-A	PAGE 7 OF 27



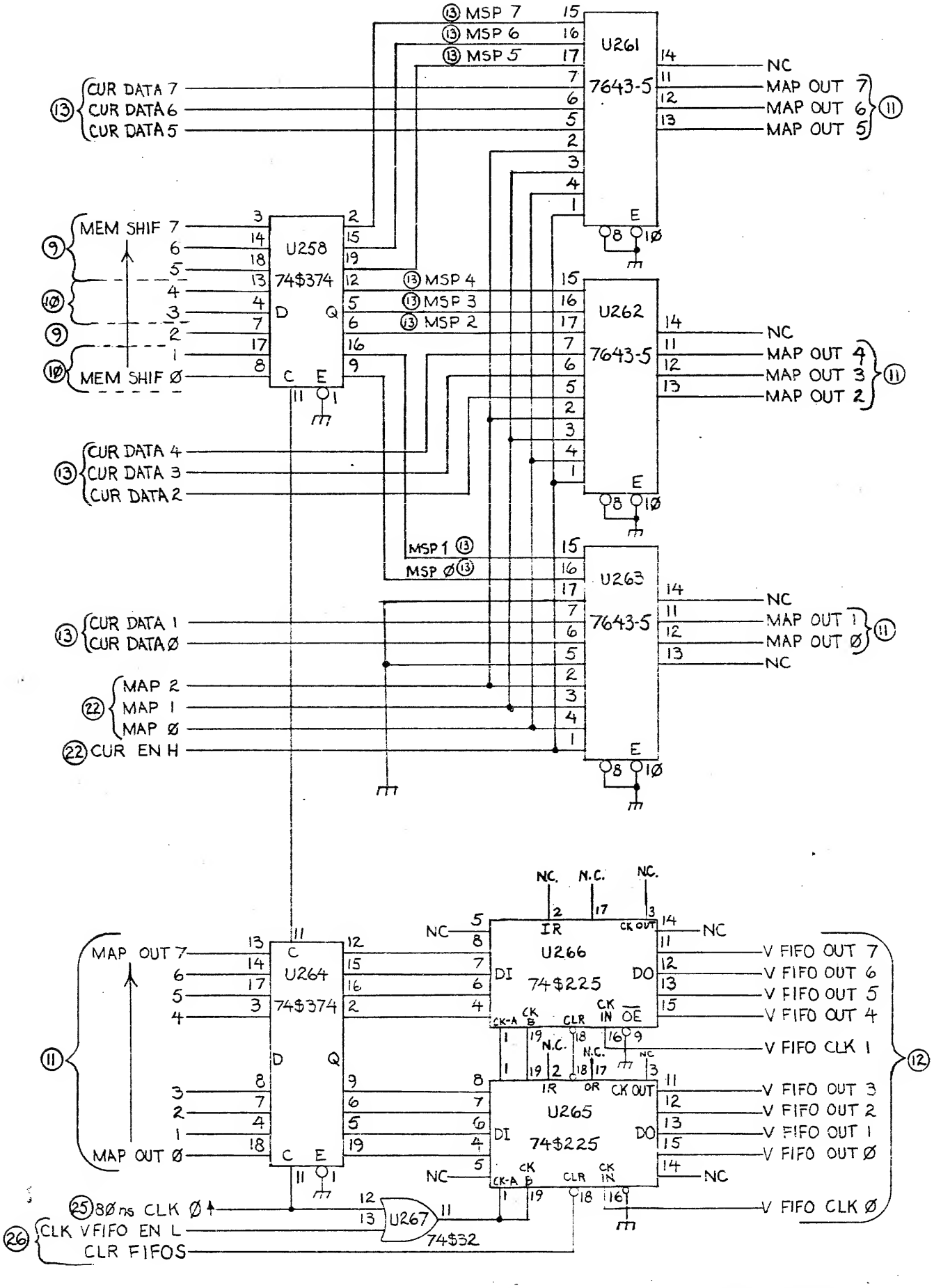
Three Rivers Computer		
DATA OUTPUT		FERQ-MEM-D
	SCA-Ø8139-38-A	8 of 27



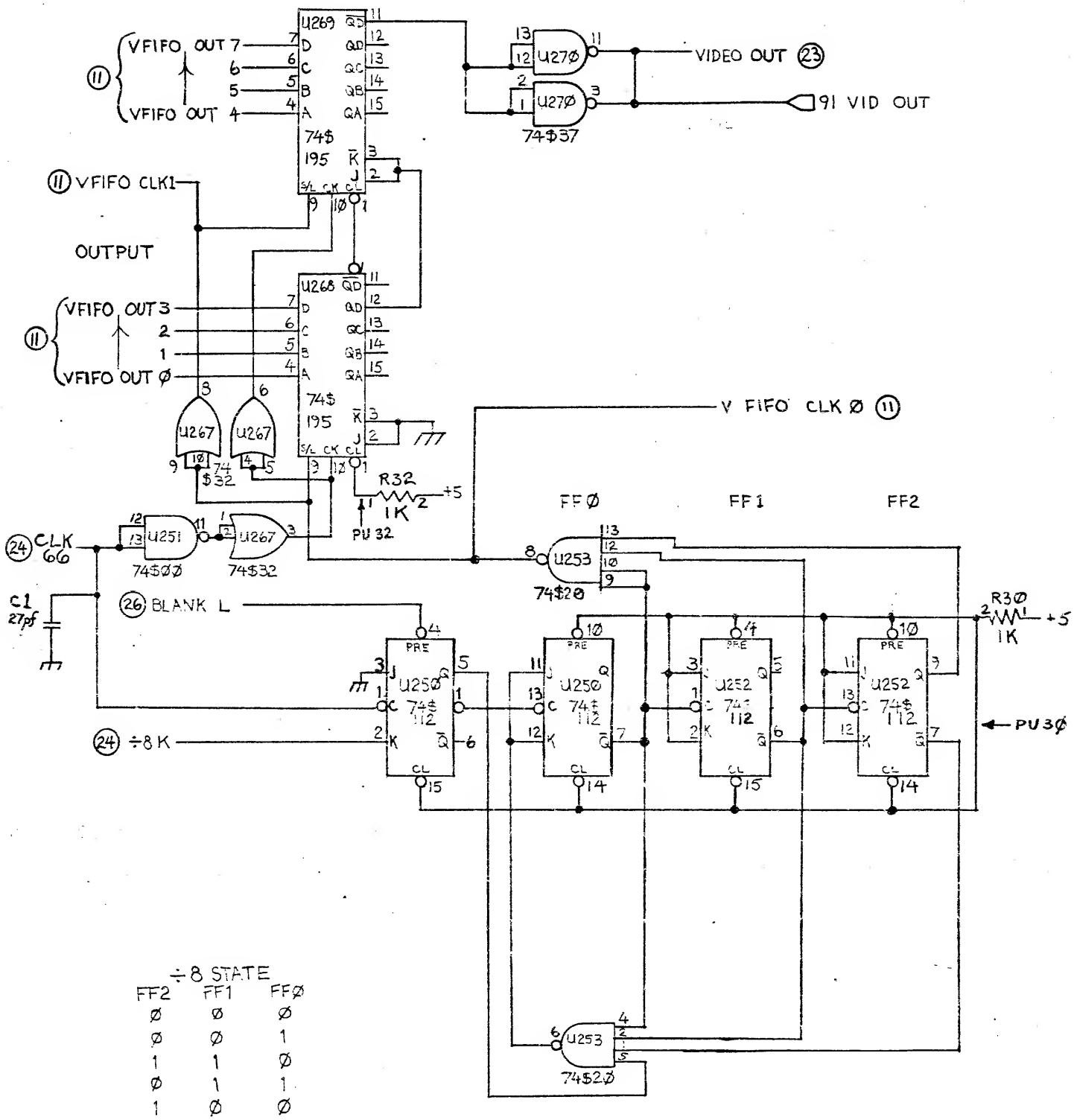
Three Rivers Computer	
MEMORY SHIFTER	PERQ-MEM
DRAWN BY JD 10/17	SCH-30138-03-A
CHECKED BY	PAGE 9 OF 27



Three Rivers Computer		
TITLE: MEM REG - 28	PROJECT: 3 RIVERS - MEM - D	
DRAWN BY: CHECKED BY:	DRAWING NO: ECA-3#38-19-A	PAGE 12 OF 27



Three Rivers Computer		
TITLE: VIDEO BUFFER	PROJECT: PERQ-MEM-D	
DRAWN BY:	SCALE: NONE	SCA-E0138-LI-A
CHECKED BY:		SHEET 11 OF 27



÷8 STATE

FF2	FF1	FFØ
Ø	Ø	Ø
Ø	Ø	1
1	1	Ø
Ø	1	1
1	Ø	Ø
1	Ø	1
Ø	1	Ø
1	1	1

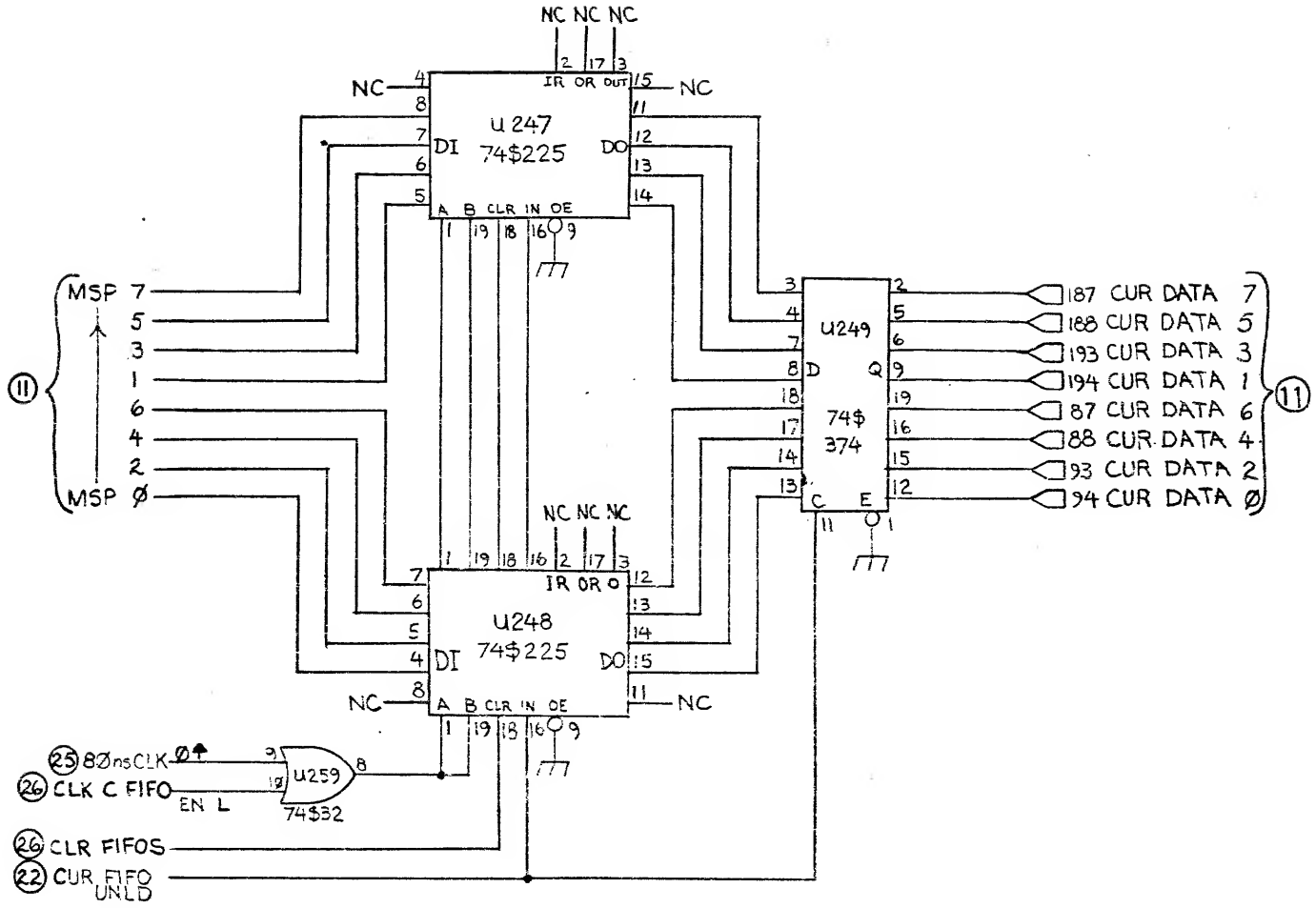
Three Rivers Computer

VIDEO OUTP

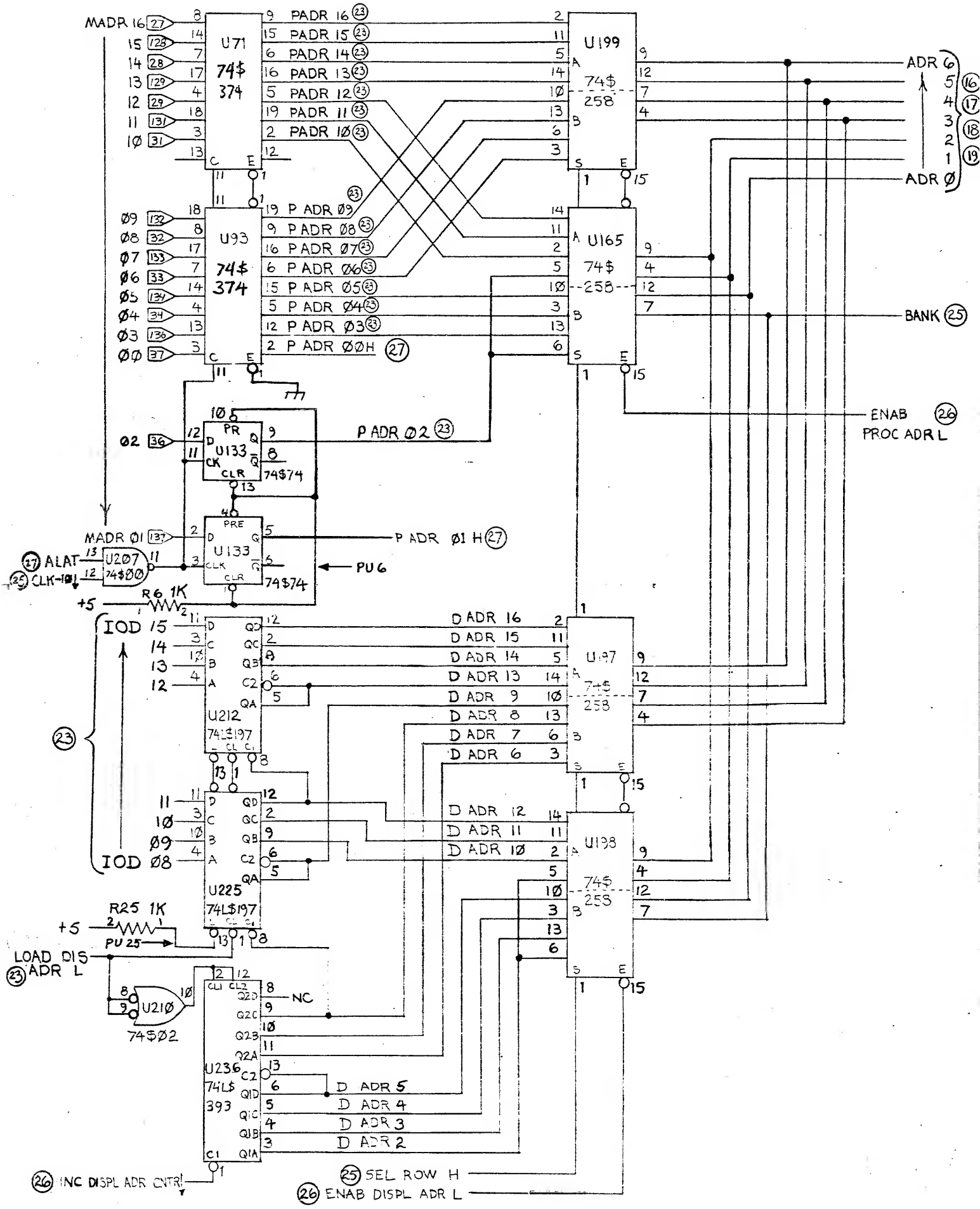
PEP 2-MEM

SCA-ØØ138-12-A

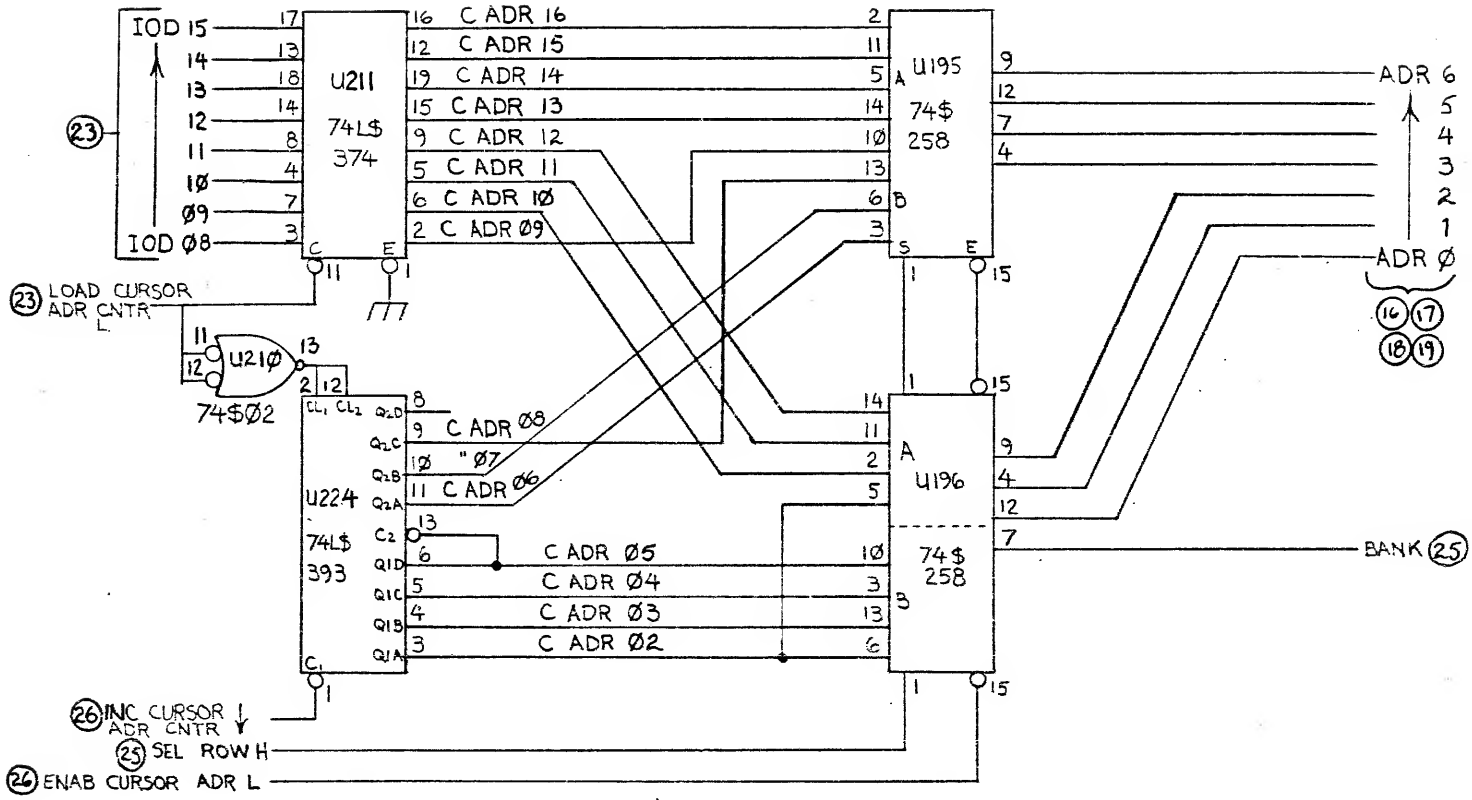
12 of 27

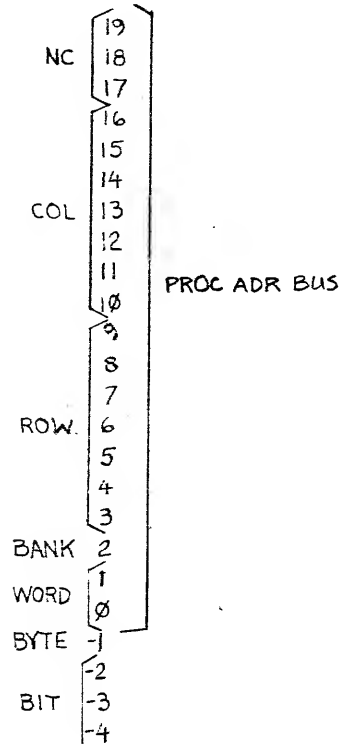


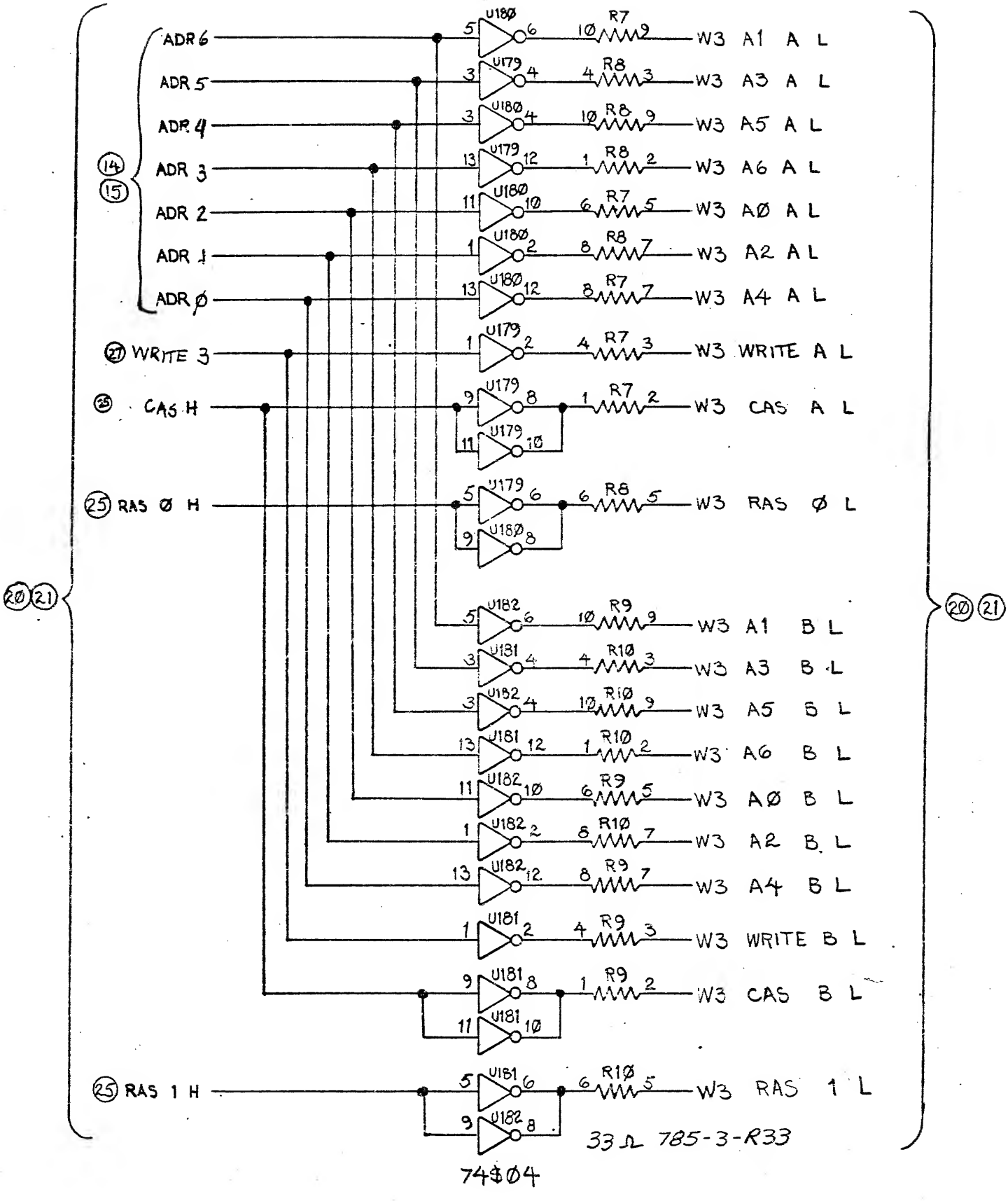
Three Rivers Computer	
TITLE VIDEO OUTPUT	PROJECT PERQ-VIEW
DRAWN BY — CHECKED BY —	DRAWING NO. ECR-02/39-15-A
	PAGE 15 - 27



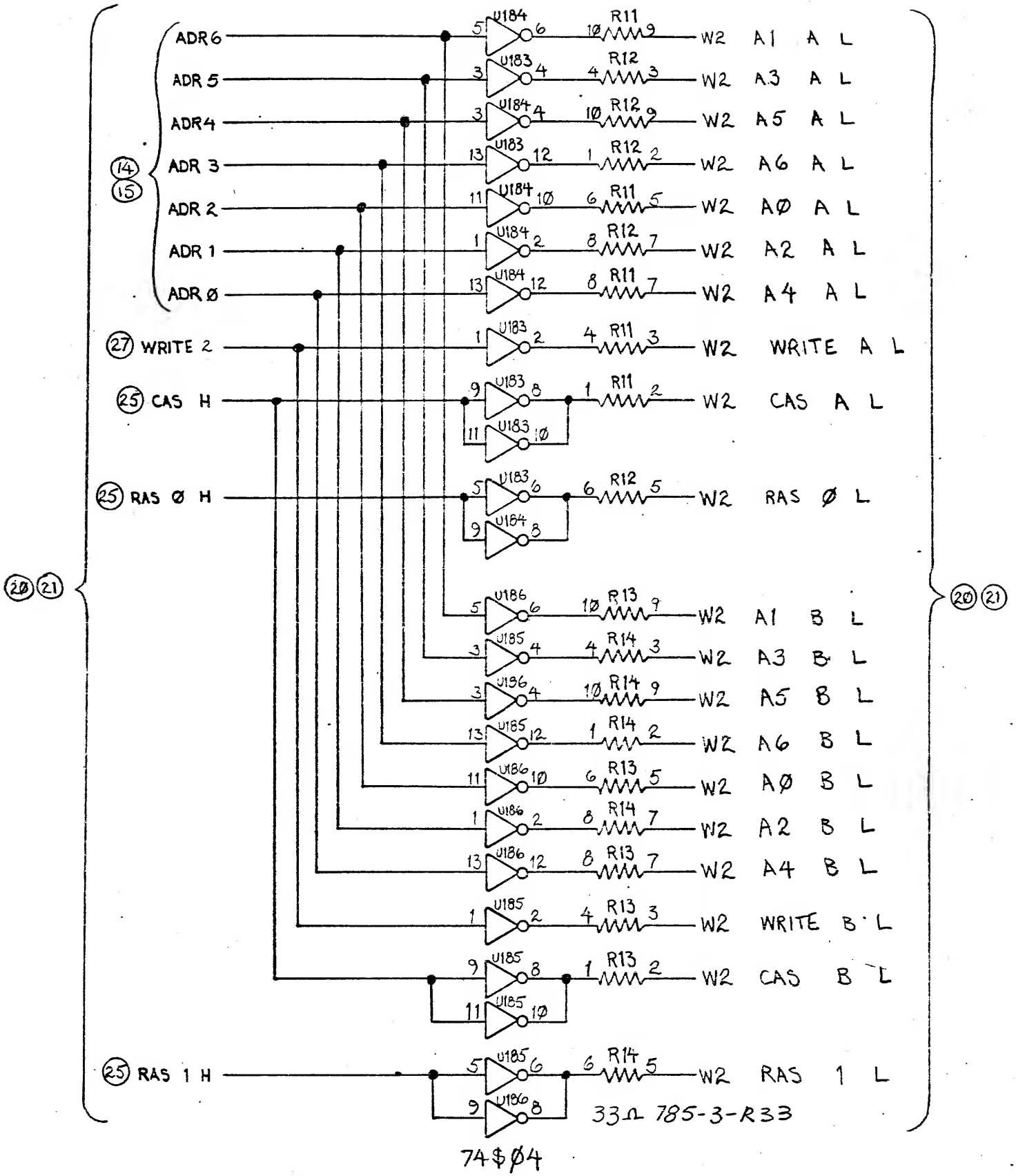
Three Rivers Computer		
MEM ADR SEL	PERQ - SYSTEM - D	
SS	SCALE 04/30-16-A	SHEET 27


IOD 15
14
13
12
11
10
09
IOD 08
U211
74L$
374
C ADR 16
C ADR 15
C ADR 14
C ADR 13
C ADR 12
C ADR 11
C ADR 10
C ADR 09
U195
74$
258
ADR 6
5
4
3
2
1
ADR 0
LOAD CURSOR ADR CNTR L
U210
74$02
U224
74L$
393
C ADR 08
" 07
C ADR 06
C ADR 05
C ADR 04
C ADR 03
C ADR 02
U196
74$
258
BANK
INC CURSOR ADR CNTR
SEL ROW H
ENAB CURSOR ADR L

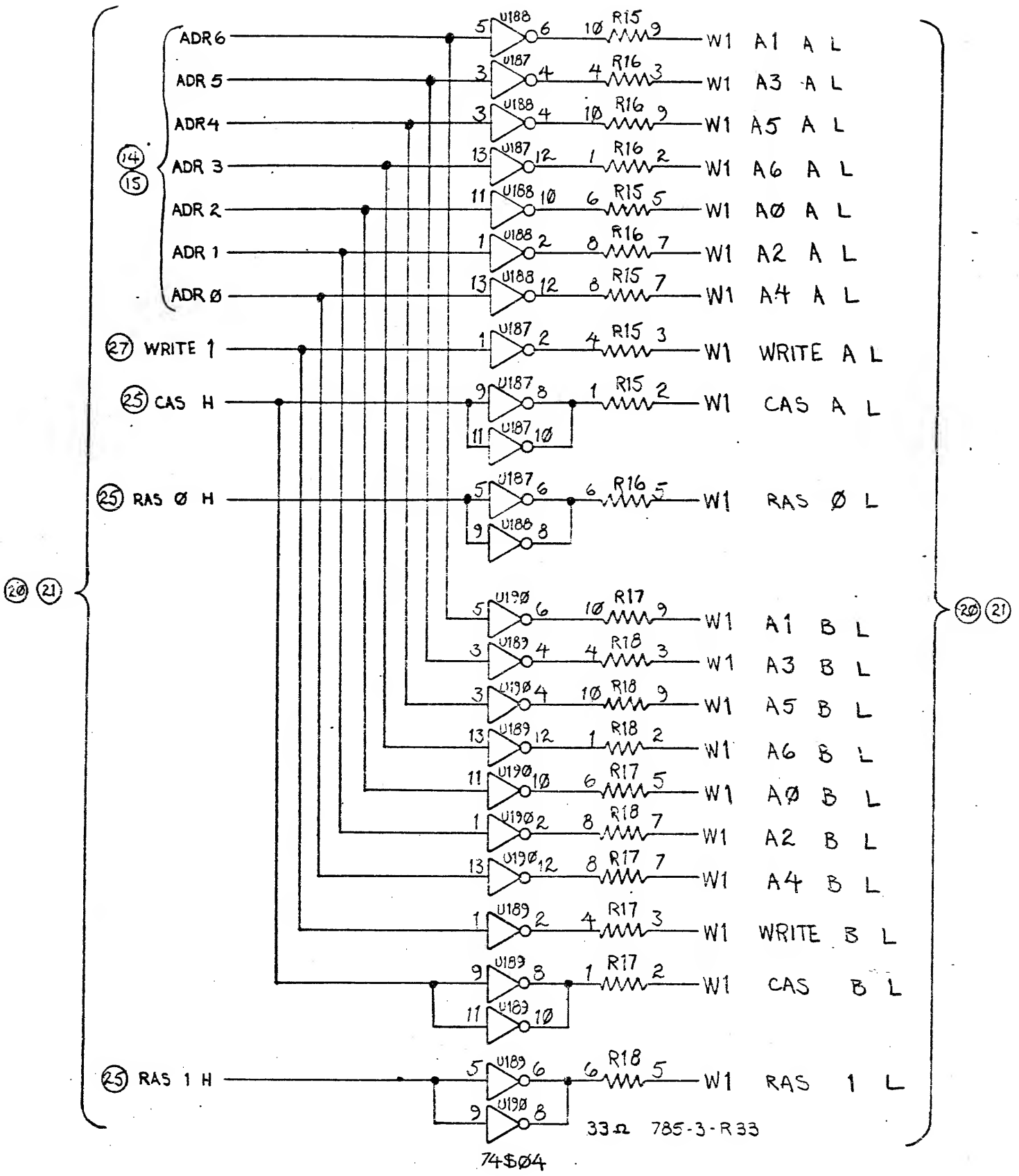

NC
COL
ROW
BANK
WORD
BYTE
BIT
PROC ADR BUS



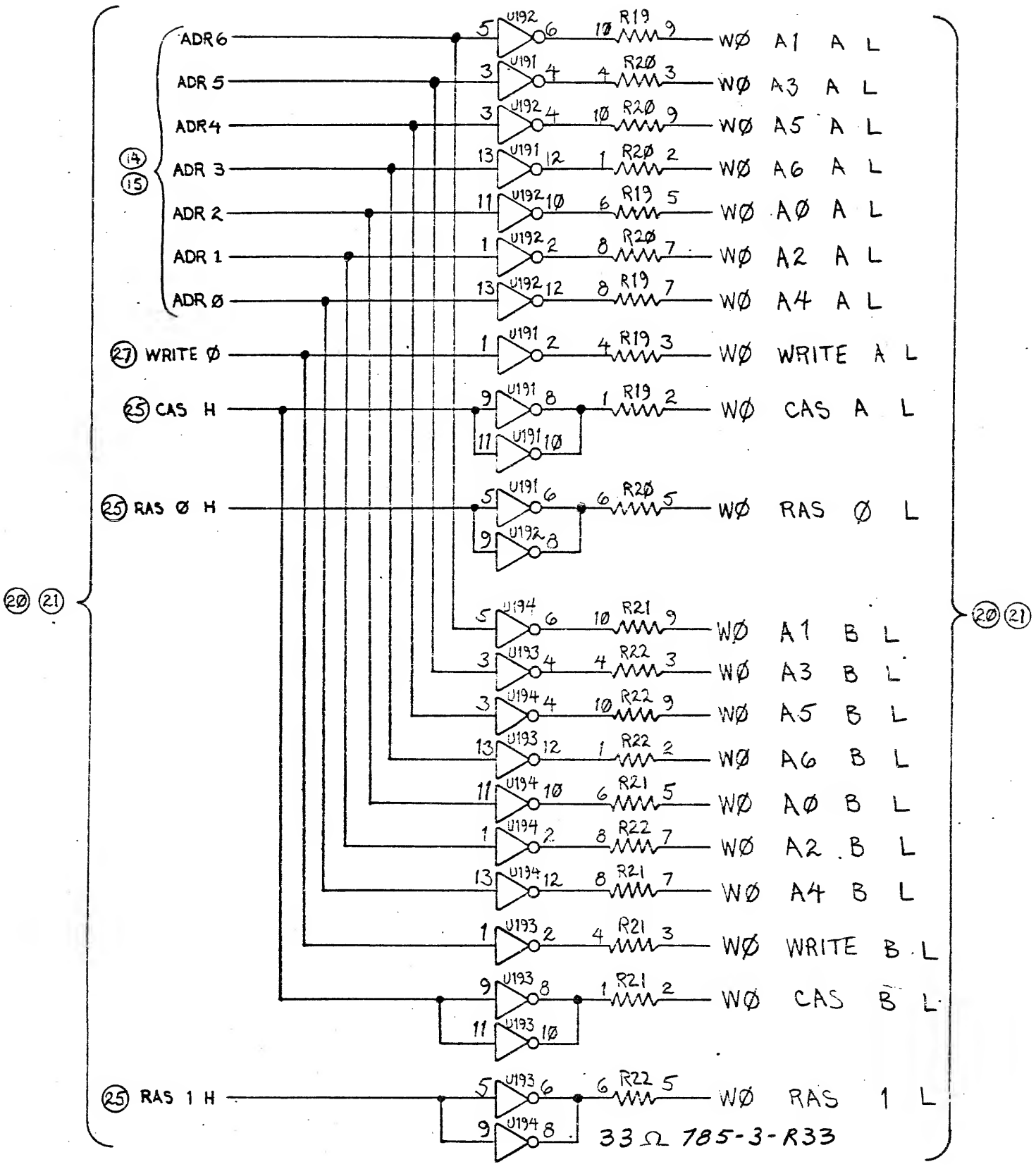
Three Rivers Computer	
MEM DRIVERS 3	PEPO - MEM - D
	SCH-001139-16-A



Three Rivers Computer	
MEM DRIVERS 2	PERQ-MEM-5
[illegible]	3002-00138-17-A — 17 = 27

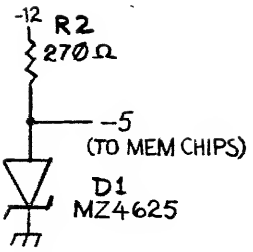


Three Rivers Computer	
MEM DRIVERS	PERQ-1-1017-D
SCALE: 3/4	SCA-4138-18-A SHEET 8 OF 17

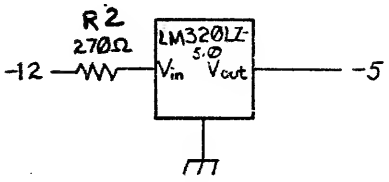

ADR 6
ADR 5
ADR 4
ADR 3
ADR 2
ADR 1
ADR Ø
(14) (15)
(27) WRITE Ø
(25) CAS H
(25) RAS Ø H
(25) RAS 1 H
(20) (21)
U192
U191
U194
U193
R19
R20
R21
R22
WØ A1 A L
WØ A3 A L
WØ A5 A L
WØ A6 A L
WØ AØ A L
WØ A2 A L
WØ A4 A L
WØ WRITE A L
WØ CAS A L
WØ RAS Ø L
WØ A1 B L
WØ A3 B L
WØ A5 B L
WØ A6 B L
WØ AØ B L
WØ A2 B L
WØ A4 B L
WØ WRITE B L
WØ CAS B L
WØ RAS 1 L
33Ω 785-3-R33

74S04

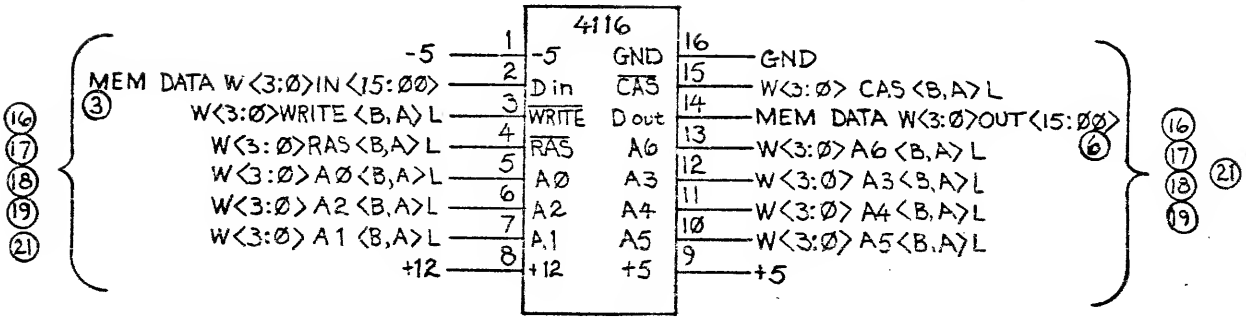
-5 VOLTS PRODUCED BY CIRCUIT "A" OR "B"



A

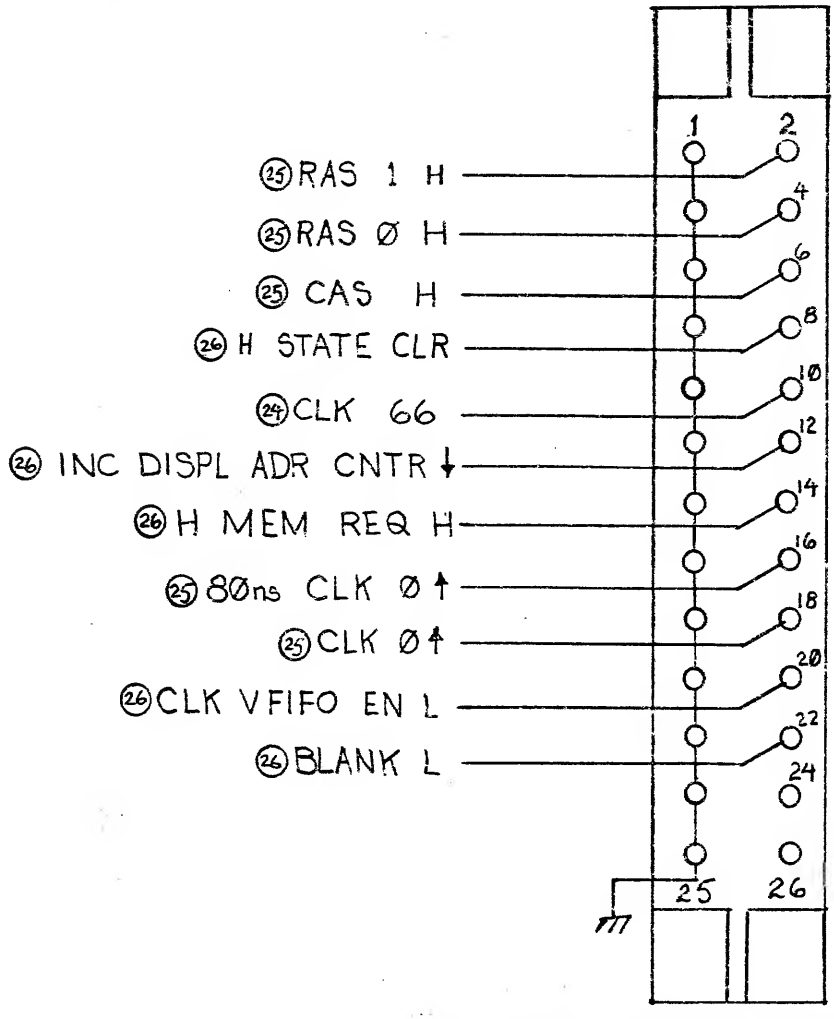


B



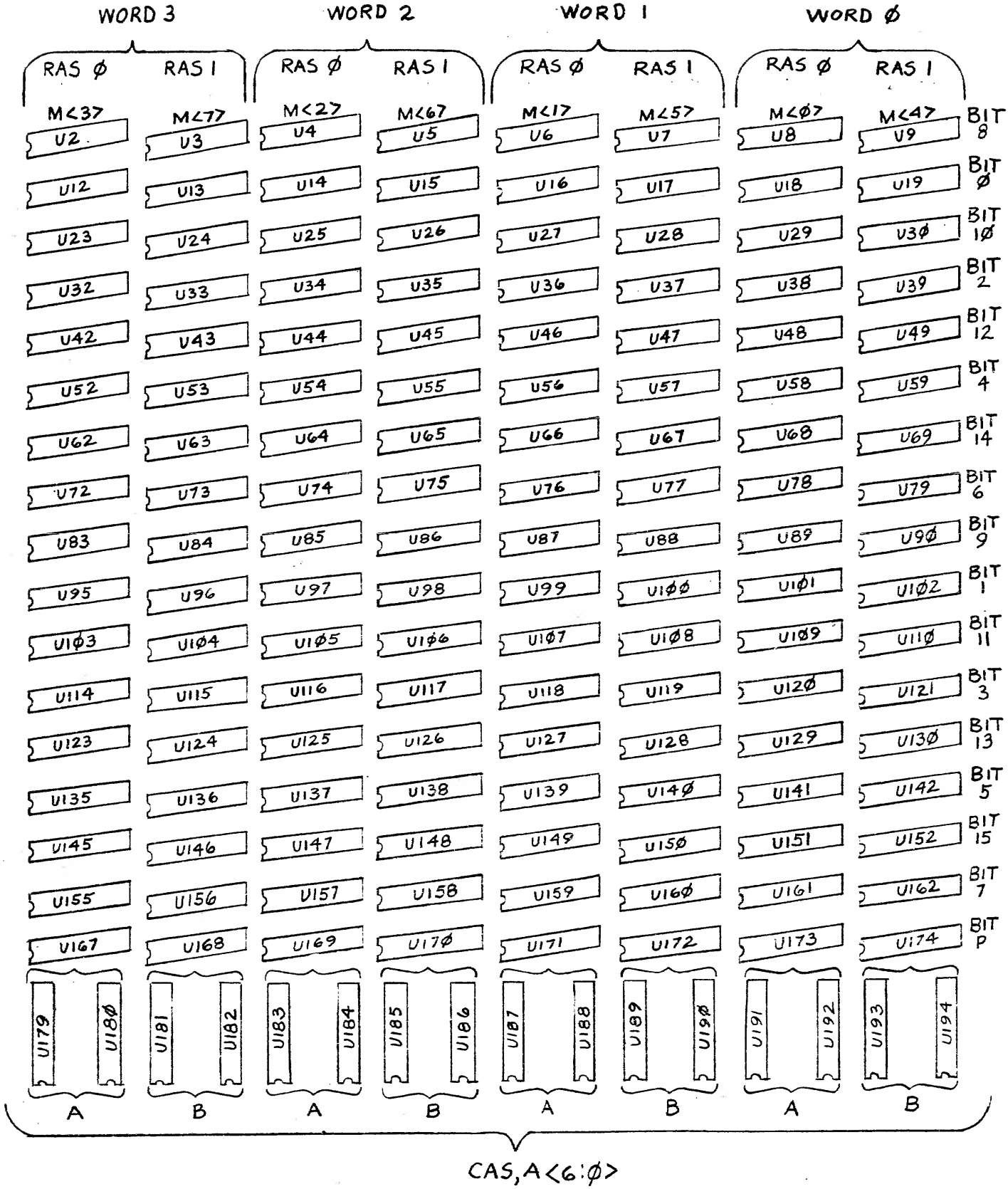
NOTE:
SEE PAGE (21) FOR RAM ARRAY

JC

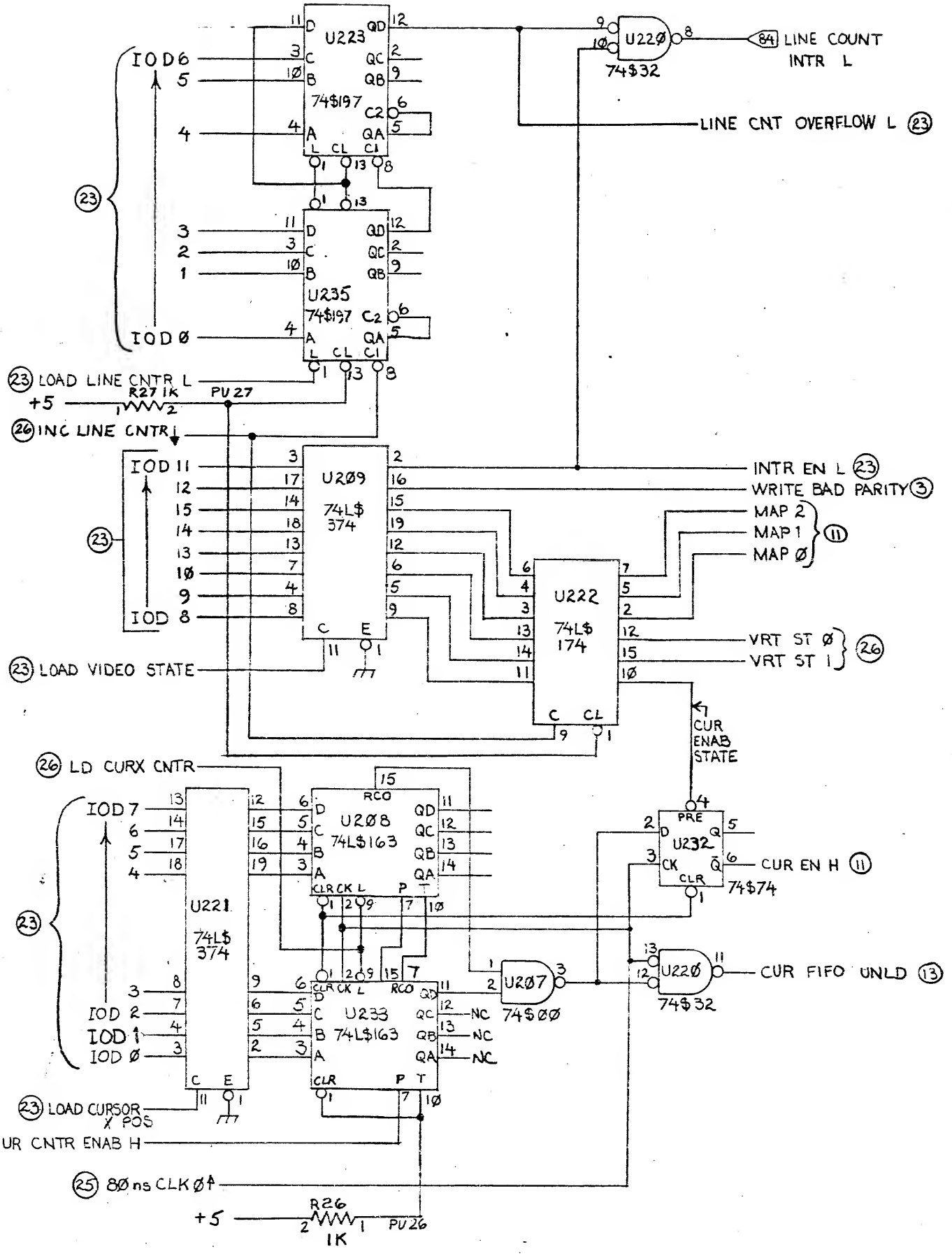


Three Rivers Computer		
TITLE: PROM - JC	PROJECT: PEPE-MEM-D	
DRAWN BY: [illegible]	CHECKED BY: [illegible]	DRAWING NO.: SCA-Ø6158-2Ø-A
SIZE: A	PAGE: 20 of 27	

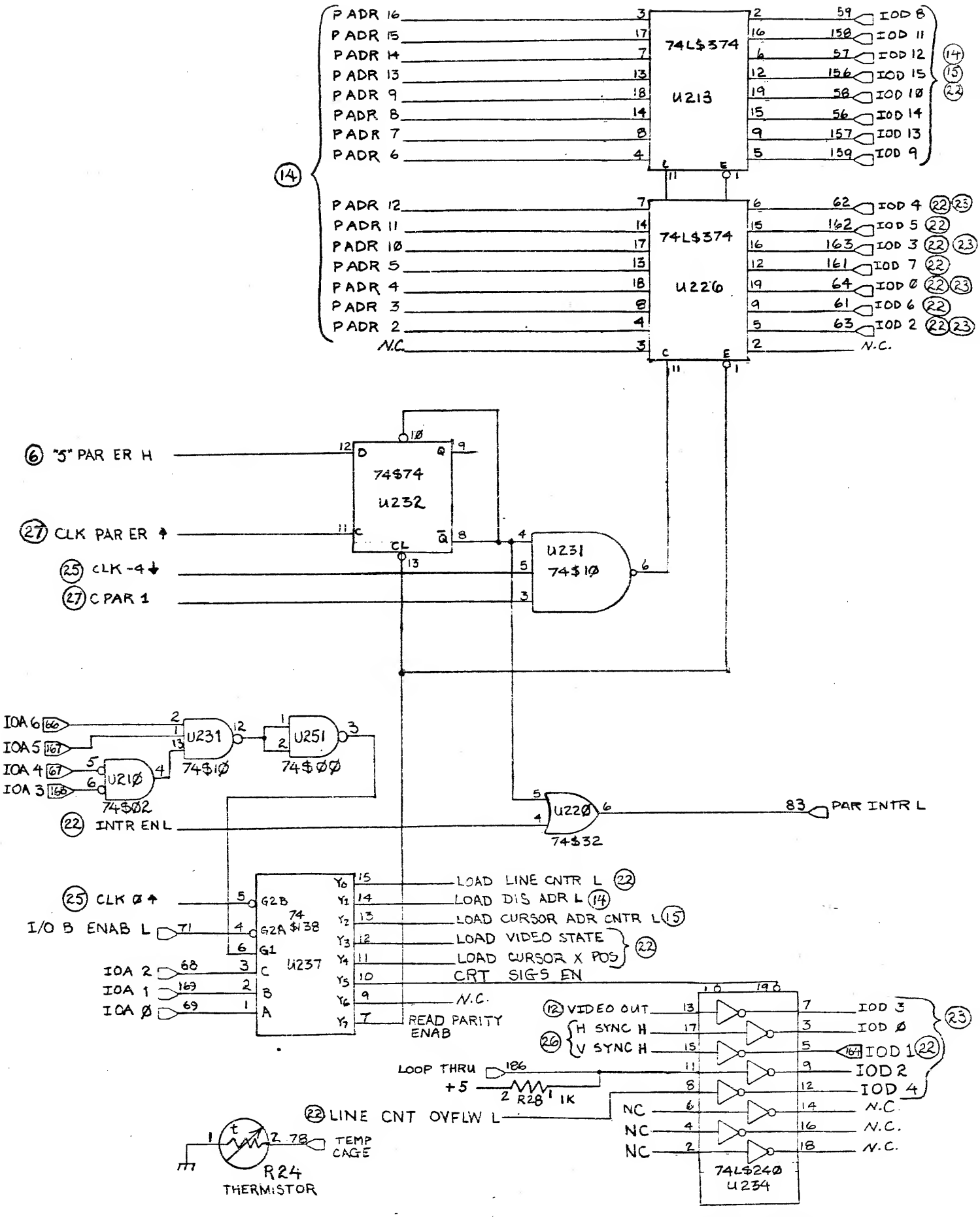
RAS Ø = BANK Ø BANK = M[2]
RAS 1 = BANK 1

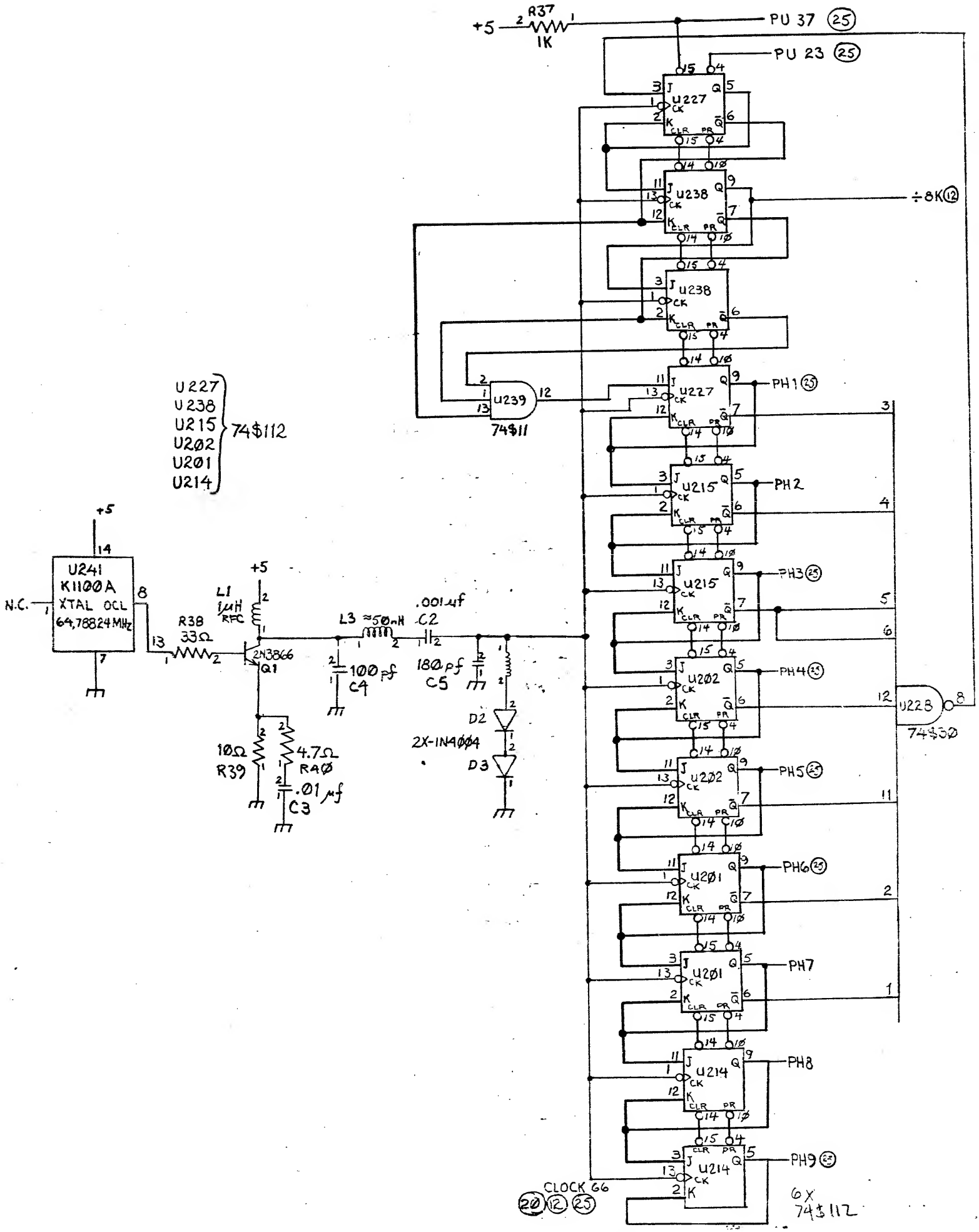


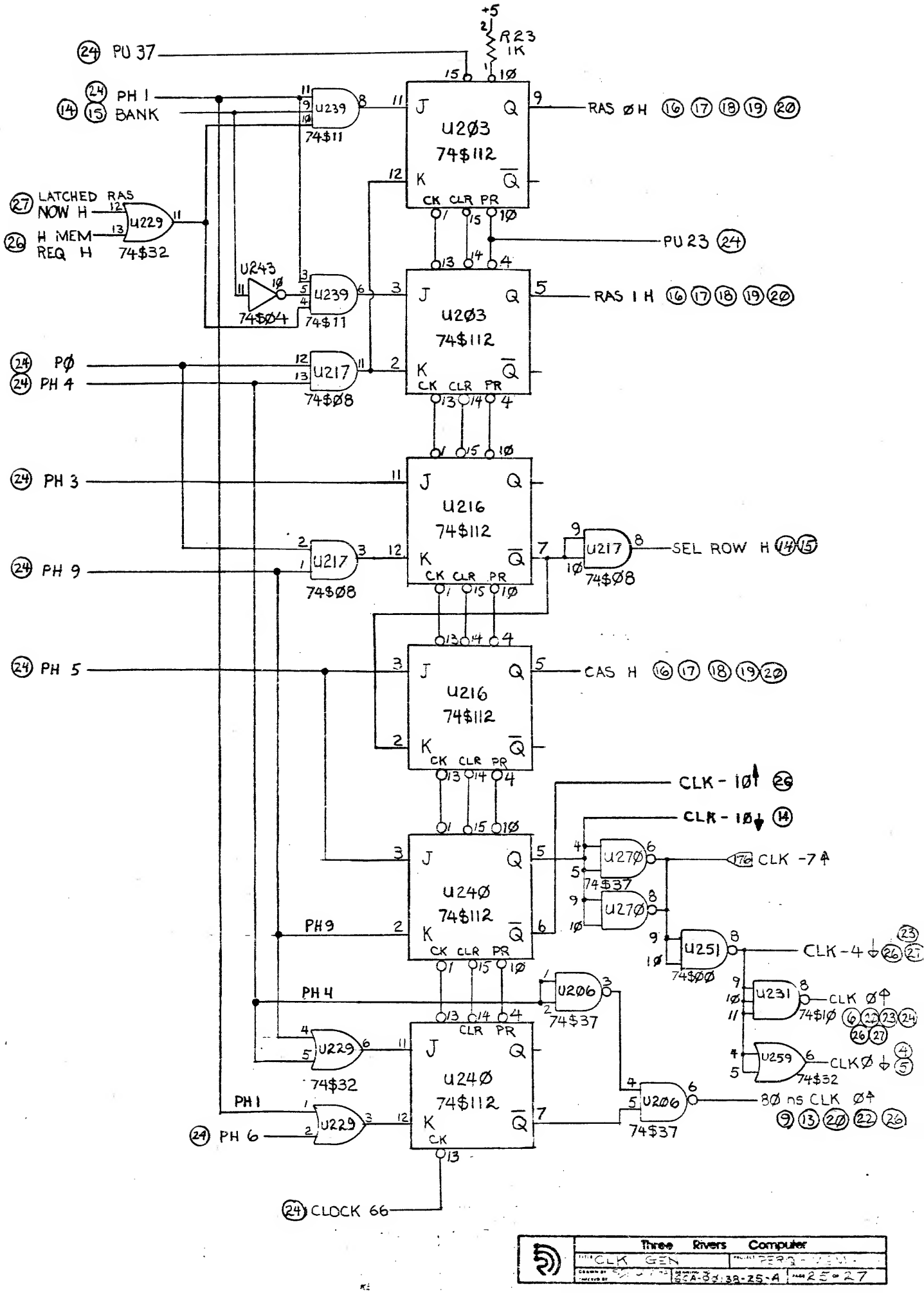
Three Rivers Computer	
RAM ARRAY	REQ-[illegible]
DIV [illegible]	SCA-03185-21-A 21 - 27

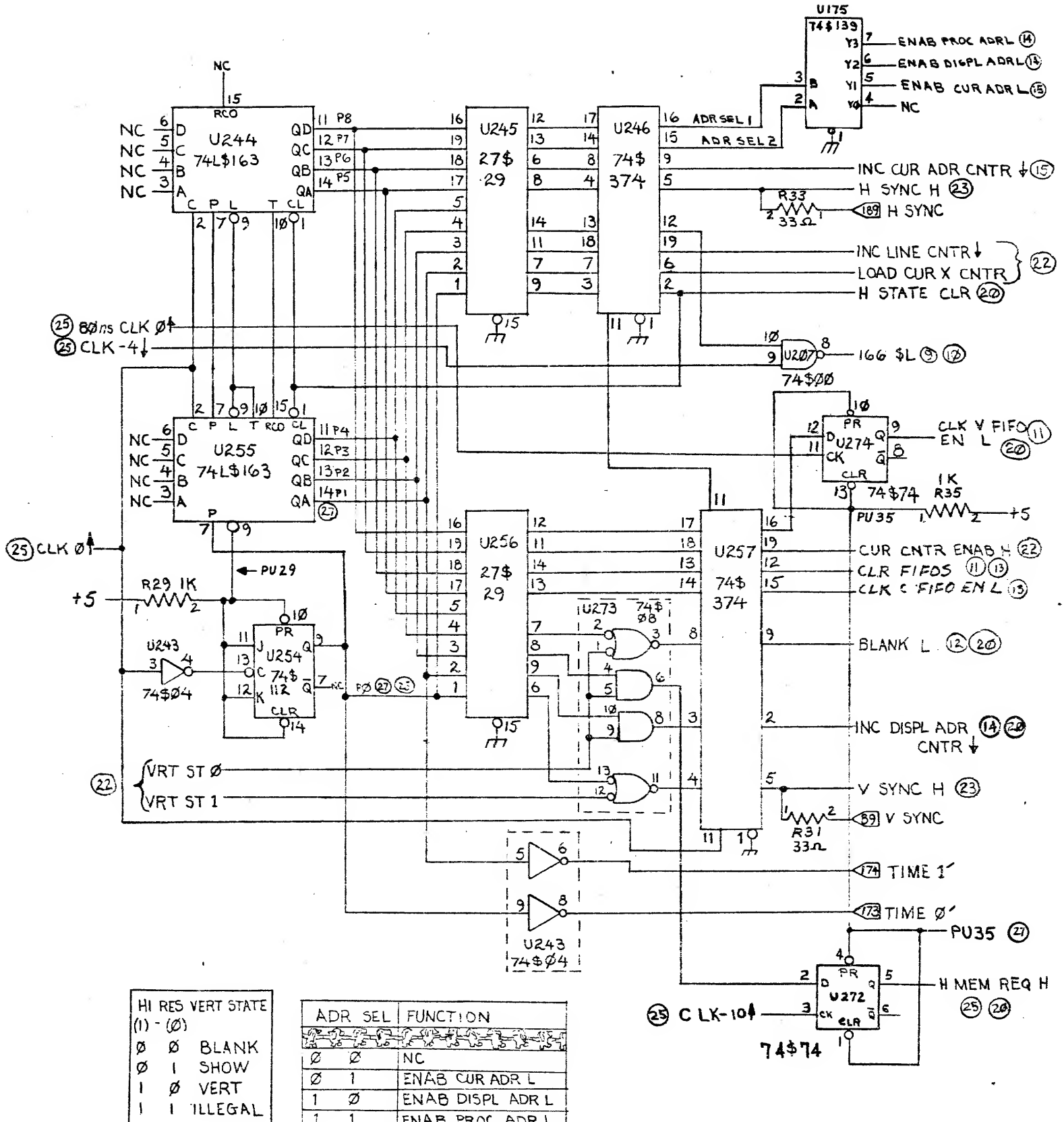


Three Rivers Computer	
I/O REGISTERS	PERIPHERAL
	SCA-00138-22-A 22 of 27


PADR 16
PADR 15
PADR 14
PADR 13
PADR 9
PADR 8
PADR 7
PADR 6
74LS374
U213
IOD 8
IOD 11
IOD 12
IOD 15
IOD 10
IOD 14
IOD 13
IOD 9
PADR 12
PADR 11
PADR 10
PADR 5
PADR 4
PADR 3
PADR 2
N.C.
74LS374
U226
IOD 4
IOD 5
IOD 3
IOD 7
IOD 0
IOD 6
IOD 2
N.C.
"5" PAR ER H
CLK PAR ER
CLK -4
C PAR 1
74S74
U232
U231
74S10
IOA 6
IOA 5
IOA 4
IOA 3
U210
74S02
U231
74S10
U251
74S00
INTR ENL
U220
74S32
PAR INTR L
CLK Ø
I/O B ENAB L
IOA 2
IOA 1
IOA Ø
74 S138
U237
LOAD LINE CNTR L
LOAD DIS ADR L
LOAD CURSOR ADR CNTR L
LOAD VIDEO STATE
LOAD CURSOR X POS
CRT SIGS EN
N.C.
READ PARITY ENAB
VIDEO OUT
H SYNC H
V SYNC H
IOD 3
IOD Ø
IOD 1
IOD 2
IOD 4
LOOP THRU
+5
R28 1K
LINE CNT OVFLW L
NC
NC
NC
N.C.
N.C.
N.C.
74LS240
U234
TEMP CAGE
R24
THERMISTOR
Three Rivers Computer
I/O REGISTERS
PERQ-ME.1
RAP 11/79
ERR-00128-23-4
23-27


+5
R37
1K
PU 37 (25)
PU 23 (25)
U227
U238
÷8K (12)
U239
74$11
U227
U238
U215
U202
U201
U214
74$112
PH1 (25)
PH2
PH3 (25)
PH4 (25)
PH5 (25)
PH6 (25)
PH7
PH8
PH9 (25)
U228
74$30
U241
K1100A
XTAL OCL
64,78824 MHz
N.C.
R38
33Ω
L1
1μH
RFC
2N3866
Q1
L3 ≈50nH
.001μf
C2
100 pf
C4
180 pf
C5
D2
2X-IN4004
D3
10Ω
R39
4.7Ω
R40
.01 μf
C3
CLOCK 66
(20) (12) (25)
6X
74$112
Three Rivers Computer
CLOCK GEN
PEPQ

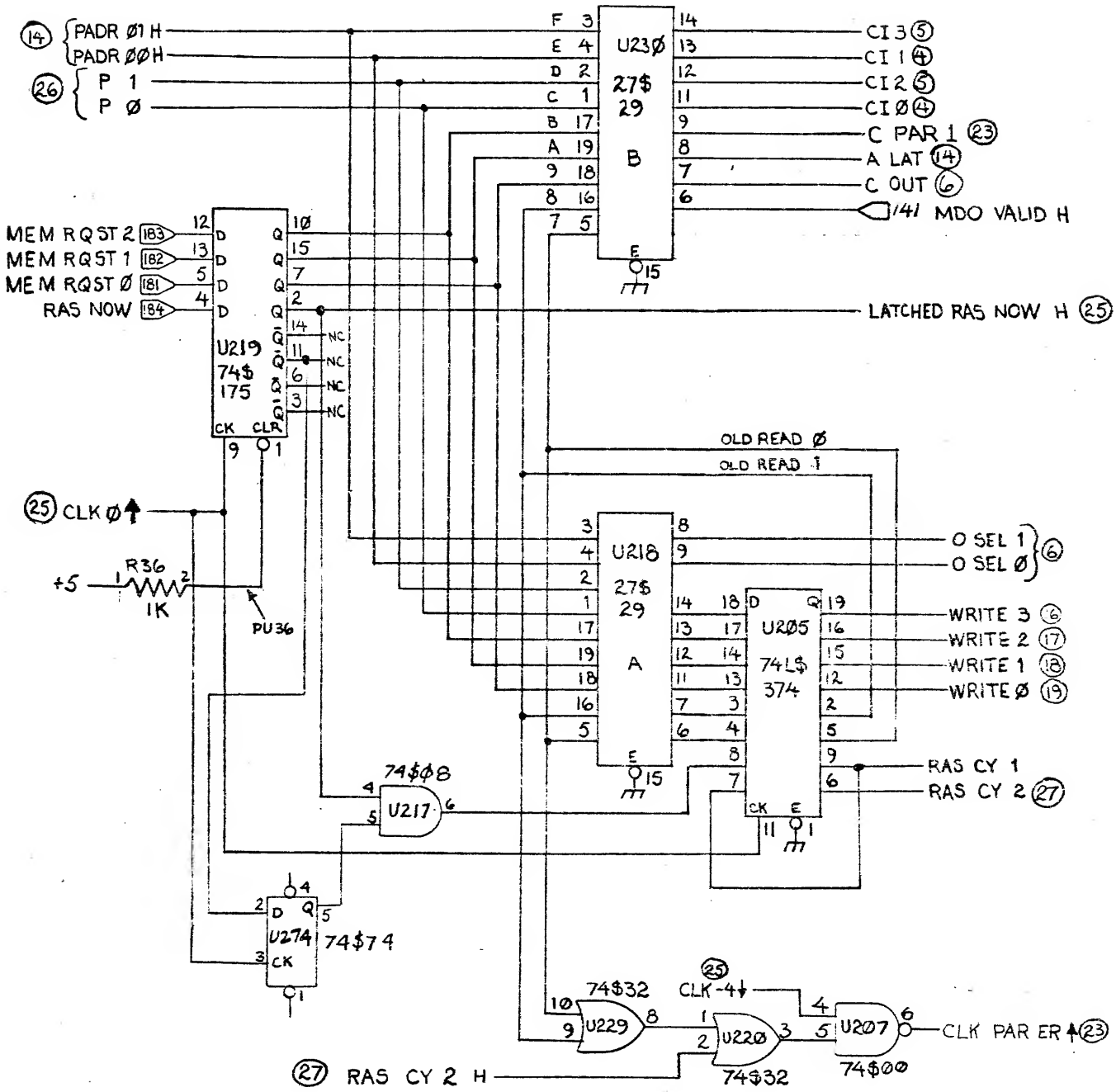

+5
R23
1K
(24) PU 37
(24) PH 1
(14) (15) BANK
U239
74$11
U2Ø3
74$112
RAS ØH (16) (17) (18) (19) (20)
(27) LATCHED RAS NOW H
(26) H MEM REQ H
U229
74$32
U243
74$Ø4
PU 23 (24)
RAS 1 H (16) (17) (18) (19) (20)
(24) PØ
(24) PH 4
U217
74$Ø8
(24) PH 3
U216
74$112
(24) PH 9
SEL ROW H (14) (15)
(24) PH 5
CAS H (16) (17) (18) (19) (20)
CLK - 1Ø↑ (26)
CLK - 1Ø↓ (14)
U24Ø
74$112
PH9
U27Ø
74$37
CLK -7↑
U251
74$ØØ
CLK -4↓ (23) (26) (27)
U231
74$1Ø
CLK Ø↑ (6) (22) (23) (24) (26) (27)
U259
74$32
CLKØ↓ (4) (5)
PH 4
U2Ø6
74$37
PH1
(24) PH 6
8Ø ns CLK Ø↑ (9) (13) (20) (22) (26)
(24) CLOCK 66
Three Rivers Computer
CLK GEN
SCA-3x38-25-A
25 of 27



HI RES VERT STATE (1) - (Ø)	
Ø	Ø BLANK
Ø	1 SHOW
1	Ø VERT
1	1 ILLEGAL

ADR SEL		FUNCTION
Ø	Ø	NC
Ø	1	ENAB CUR ADR L
1	Ø	ENAB DISPL ADR L
1	1	ENAB PROC ADR L

Three Rivers Computer
HORIZONTAL STATE
SCA-ØØ128-26-A



Three Rivers Computer		
MEM CNTL		MEM
	ECA-ØØ138-27-A	27 of 27